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Apple and Pear Publicity

Active Campaign in Progress to Increase Fruit Consumption in Australia.

An active campaign to increase the consumption of Apples and Pears in Australia is now in full swing. It was promoted by the Australian Apple and Pear Export Council, and, recognising its value to the industry, generous assistance was forthcoming from the Federal Government and the State Governments of New South Wales, Victoria, Tasmania and South Australia. Growers Associations in Victoria, South Australia and Queensland also got well behind the Campaign.

Attractive advertisements appealing to various sections of the community are appearing in the metropolitan press of Sydney, Melbourne, Brisbane and Adelaide; radio announcements are being given regularly; other propaganda includes the production of a handsome recipe book, two health booklets, poster for Railway Stations in the several States, window streamers and stickers and showcards and leaflets for fruiterers.

In addition, radio talks on Apples are being given over National and "B" class stations.

State committees are at work in Sydney, Melbourne, Brisbane, and Adelaide.

In Victoria some excellent work was done by officers of the Southern Fruitgrowers' Association in providing Apples for free distribution to schools, kindergartens, creches and the Children's Hospital. This brought a wealth of press publicity, particularly charming photos of children enjoying Apples. Fifty-three schools, 11 creches and 4 kindergartens were thus served; over 100,000 Apples were distributed and a health talk on Apples was delivered to 50,000 school children. Another valued activity was the co-operation with the Health Week authorities. Apples (and, in fact, other fruits) are specially mentioned in the Health Week Booklet of which 50,000 copies were distributed. City shops and department stores generously provided space in their windows for displays of Apples and Pears. This attracted much favorable attention and secured favorable press notices.

Health and nutrition authorities in the several States are co-operating, as also are Housewives' Associations, Mothers' Clubs, Parents' and Citizens' Associations, Womens' Organisations, Baby Health Centres, etc., etc.

As regards finance, the Federal Government promised £1 for £1 up to £5,000, with contributions from State Governments and donations from growers' associations and others. So far contributions have been made by State Governments as follows:—Tasmania, £1,000; Victoria, £1,000; New South Wales, £963; South

Australia, £350; Victorian Cool Stores (so far), £1,000 (more is expected); South Australian Fruit Marketing Association, £150; Committee of Direction of Fruit Marketing, £50; Victorian Fruit Marketing Association, £50; a total so far of £4,563, to which will be added a similar sum from the Federal Government, making a total of £9,126.

An Important Statement.

One of the most important statements in connection with Apple consumption was recently contributed by Dr. Cecil D. Hearman, Lecturer in Preventive Dentistry at the Melbourne University. Dr. Hearman writes as follows:—

THE EATING OF AN APPLE after each meal provides the necessary mechanical action for cleaning the teeth. The munching of the Apple cleanses the surface of the teeth from the sticky carbohydrate debris which would otherwise remain, the fermentation of which causes dental decay.

The eating of an Apple at the close of every meal is highly important as the mastication creates a copious flow of saliva—which is so necessary for the digestion of the cooked starchy portion of our food.

The eating of Apples is of the utmost importance because the mastication provides the teeth with the functional stimulus which is essential for the health of the teeth and the full development of the jaws, the dental arches and the nasal passages.

When one considers that the roof of the mouth is also the floor of the nose, one realises the necessity for ensuring that the dental arches receive sufficient functional stimulus to ensure their full development. This is of particular importance to young children during their formative periods. Incomplete development of the arches and the consequent incomplete development of the nasal passages is responsible in no small measure for a great deal of the diseases of the tonsils and adenoid tissues so deplorably prevalent in children to-day.

The order in which we eat our food is very important. An Apple should be eaten at the close of every meal.

We need roughage or ballast in our diet. Soft foods are wholly insufficient. An Apple at the close of each meal supplies the needed roughage. It is the lack of this quality which is causing such a tremendous lot of sluggishness in the bowel tract. Sluggishness of bowel movement causes an accumulation of waste material in the human system. The poisons which are set up in this waste material are held by some to be responsible for many of the chronic diseases which affect people in middle life—rheumatism, indigestion, rheumatoid arthritis, constipation, etc.

Sir William Arbuthnot Lane, the eminent London surgeon, recently stated:—"There is but one disease—defective drainage of the human system."

On the other hand, the most effective drainage of the system is possible by including fruit in our diet at every meal. Apples provide the indigestible residue which gives the muscles of the bowels something on which to act. This is necessary for the forcing of the waste material through the bowel passages.

Fruitgrowers would themselves do well to follow this advice of eating an Apple after every meal and teaching their children to do likewise. Growers and all interested are urged to absorb the information given by Dr. Hearman, and to bring forward this item every time in conversation with country and city friends. This personal propaganda is really very effective.

It may be said in conclusion that earnest efforts are being made to serve the industry in this publicity campaign in the conducting of which the health of the nation will be improved.

In one county alone (Lassen, in California), the U.S. Forest Service Department has planted over 1,000,000 trees in fire-swept areas. Transplanting of nursery trees to damaged areas will be continued in about this number every year.

Inability to secure the 8,000 pickers needed for the Carolina Strawberry crop in May and June was predicted, at time of the report, as prophesying a severe loss to growers.

Answers to Correspondence

Tung Oil.

A correspondent in Western Australia asked for particulars re Tung Oil Tree, market value of the oil, and general description.

In reply we have to state that the New South Wales Department of Agriculture advises that they are experimenting to test the suitability of the tree to various parts of Australia. Until recently China was the only country growing the tree commercially. There are no large commercial groves of Tung Oil yet in full production in Australia, therefore no figures can be given.

Tung Oil is an important constituent of waterproof varnishes and paint liquids, it is also used as an ingredient for dressing leather and for floor varnishes.

A hot Summer and a fairly cold Winter seems to suit the plant best, but a rainfall of not less than 28 or 30 inches is also required. The Winter needs to be sufficiently cold to

give the plant a period of rest, and it does not appear to do well where frosts are heavy. Most classes of soil suit the tree, but it prefers a slightly acid soil and does not like lime. A deep soil of a sandy or light nature with organic matter is ideal.

Preparation of the land should be similar to that for planting any farm crop. Trees should be planted 116 to the acre, in rows 30 feet apart with 12½ feet between the rows. When the trees become crowded, every other tree can be cut out. Vigorous one-year-old trees are best for transplanting. Transplanting should be done while trees are dormant (June, July, August), care being taken that sufficient moisture is present.

Do not plant too deeply. A fair crop should be produced the fifth year and the tenth year full bearing should be reached, if the trees have been cared for sufficiently well.

A fair yield is considered to be 50 to 70 pounds of nuts to the tree—58 trees to the acre. In Australian experiments, the kernels yielded from 35 to 50 per cent. oil. The fruit grows either singly or in clusters, and is from two to three inches in diameter—five or more seeds in each fruit, surrounded by an outer husk; 340 to 350 nuts go to a bushel of 30½ pounds.

The fruit falls to the ground and may be left there until convenient to gather them and then stored in a dry place. The tree lives about 25 to 30 years and is not susceptible to insect pests or disease. The Department does not recommend the planting of large commercial areas at this stage, where there is any doubt as to the suitability of the soil and climate.

PERSONAL.

We are pleased to be able to report that Mr. T. E. Butler, who is Secretary of several cool stores and fruit organisations, and who has recently been very ill, is now on the road to recovery. At the moment, Mr. Butler is recuperating in Northern Queensland and expects to return to his office towards the end of August.

.. ..

Mr. A. E. Gibson, Director of Agriculture, Queensland, died on July 8 after a long illness. Born in Victoria, graduating from Dookie Agricultural College, he joined the Queensland Department of Agriculture in 1911 as a foreman at the Gatton Agricultural College.

Captain A. W. Pearse, who has represented The Port of London Authority, in Australia and New Zealand, for the past 18 years, will retire, for age reasons, on June 30, 1938. Mr. T. R. Toovey, Chief Assistant to the general manager, Sir David Owen, will arrive at the end of the current year, and will take over control at the end of next June. Mr. Toovey paid a visit to Australia a few years ago.

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Winter Work in the Orchard

Spraying, Pollination, Pruning

By J. L. Provan, B.Ag.Sc. (Horticultural Research Officer, Department of Agriculture, Vic.)

The following is a resume of a Radio Talk over Station 3AR by Mr. J. L. Provan.

AVEN although it is Winter, and a particularly severe one, our friends have joined the nudist colony. These friends are fruit trees. They have discarded their foliage and are taking a well-earned rest. The orchardist can now read the story of the past season, for he can see early the amount and condition of growth the trees have made.

With the usual hope he makes his first forecast of the approaching crop. Of course, he realises that many factors from now until the next harvest will modify any estimate he makes, but he will be able to at least know how the season will commence.

Pruning is now in full swing, and each grower is paying attention to the number of blossom buds in each tree and the number and length of laterals he will leave for fruit or to form into fruiting laterals next year. Common expressions amongst orchardists at this time of the year are: "There is a fine show of buds for next year"; or perhaps "The mathan buds are light." These terms refer particularly to the proportion of large, well-filled, rounded

conditions which are beyond the grower's control, except that the provision of efficient breakwinds will reduce the losses caused by these conditions. Insects will be more active carriers of pollen in a sheltered orchard than in an exposed one, and growers who have not provided such shelter should seriously consider planting one this Winter. Pinus insignis, Cypress, Blue Gum and Sugar Gums have been extensively used for shelter belts and these trees can be planted now. The pollen of fruit trees is carried only very short distances by wind, and one or more hives of bees per acre will be found useful in assisting pollination.

Pollination.

Another essential factor in setting fruit is an abundant supply of viable pollen. I feel sure that even in orchards where trees of one variety have been planted in three or four row blocks, alternating with the correct polliniser, a better result would be obtained by having one or more pollenisers top-worked on the upper portion of each tree. Growers who contemplate this operation should obtain the necessary scions

root zone and be absorbed and assimilated.

Drainage.

The Winter months usually provide a good opportunity for testing the efficiency of the drainage system of the orchard.

Surface drains, formed by "ploughing-in," are sufficient in some orchards, while others require the underground tile system. An inspection of the outfall of the tile drains after heavy rain will show those which are not functioning properly.

Another useful method of removing excessive moisture from the soil is by the use of a cover crop. A good cover crop either sown or self-sown can transpire large quantities of water. This fact has been utilised in some fruit-growing districts to produce earlier and better colored fruit by reducing the soil moisture available to the trees in the late Autumn. There is the danger, of course, that in a dry Spring the cover crop may compete seriously with the trees for the soil moisture, and so reduce the setting of the crop. When this is likely to occur, an

material can be employed against such pests. To destroy the eggs of both the Green Peach Aphid and the Cherry Aphid, tar distillate at a strength of 1 gallon in 35 gallons of water will be found effective if applied before the end of July. For Black Peach Aphid, tangle-foot should be placed around the tree trunks during June and July to trap this insect when it migrates from the roots to the tree tops, in early Spring. Red Spider and San José Scale can be effectively controlled by Winter sprays of lime sulphur, 1 gallon to 9 gallons of water, or red oil, 1 gallon to 20 gallons of water.

Control of Codlin Moth.

The problem of orchard sanitation is a very interesting one. The control of Codlin Moth in Victorian orchards affords an excellent subject for a discourse on orchard sanitation. The usual arsenate of lead and oil sprays are applied with monotonous regularity, and give varying results. Instead of adopting the attitude that spraying is the last line of the defence system, many growers prefer to make it the heavy artillery. They retreat from the front line defences where they could inflict heavy casualties on the foe and allow him (or is it her this time?) to add battalions to the attack.

The front line defences used in repelling Codlin Moth attacks have been called supplementary control measures. I think this is an unfortunate term, because it conveys the impression of only a minor role. The recent increased interest in banding fruit trees, either with hessian or chemical bands, is a step in the right direction, and in some orchards this development has assisted in reducing the Codlin infestation to very low numbers. The second-hand fruit case and the packing shed are constant sources of infection for most orchards. Some growers have made their sheds moth-proof, and now store all their picking boxes in them. By placing troughs containing vinegar solution beneath the western windows, these growers have trapped thousands of moths in the Spring.

The removal of loose bark from trees and props, and filling wounds and crevices in trunks and branches reduces the amount of cover available for the Codlin larvae, which must seek shelter to hibernate and pupate. This will ensure that a larger proportion of larvae will be found in the bands.

The subject of pruning is not a particularly suitable one to treat in a remote manner, and I have refrained from discussing even the main principles because growers are already well versed in this subject.

Make Preparations Early.

There are a few reminders in other directions which might be helpful. As soon as Winter spraying is completed, see that the spray equipment is thoroughly overhauled in readiness for the next season. Breakdowns in the spraying outfit are sometimes very costly.

Secure an ample supply of scions for reworking unprofitable varieties of trees in the Spring, and bury these in a cool, moist place to keep them dormant.



Constant cultivation is important at this time of the year owing to existing dry conditions.

lossom buds compared with the number of smaller and pointed buds which will produce leafy shoots only, next season. He becomes optimistic or pessimistic as the proportion increases or decreases, and the first estimate of next year's crop is based on these buds.

Learning from the Past.

He perhaps recalls that a year ago he was making similar forecasts of the crop just harvested, and reflects on those factors which prevented him from obtaining the anticipated yield. The important aspect of this position is to find out what steps have been taken to consider these various factors. If the crop didn't reach expectations, where did the losses occur, what were the causes, and how are they likely to be overcome? In some cases the trees blossomed well, but too few blooms were fertilised, and therefore the setting of fruit was light.

This lack of cross-pollination may have been caused by cold, windy

during the pruning season. A useful suggestion in this regard is to choose varieties which will pollinate the early, mid-season and late blooms of the main crop.

If adequate pollination was provided and fruit setting still remained poor, then attention should be directed to the nutrition of the tree, particularly during the early Spring. The fertiliser practice can best be considered at this time of the year. A digestible menu should be prepared and the meal must be served punctually and well within the diner's reach. Where growth last season was poor, it is likely that the tree will experience a nitrogen shortage at blossoming and setting. This is the time when the trees' nitrogen demands are high, and hand-feeding with sulphate of ammonia or nitrate of soda should be adopted, about three or four weeks before. Don't wait till the newly-formed fruit begins to fall, but allow sufficient time for the fertiliser to reach the

early irrigation will be found beneficial.

Plough under cover crops early while they are still succulent. Rapid decomposition and the accumulation of nitrate nitrogen will benefit the trees. If ploughing is delayed until after blossoming, it may be injurious temporarily to both trees and crop unless other provisions have been made to increase the available nitrogen. In orchards where the cover crop has been sown late, in alternate lands, the majority of the growth is made in the early Spring, then ploughing may be delayed to obtain a crop, but growers should supplement the nitrogen supply by applications of this type of fertiliser to the bare lands and plough these lands early.

Spraying.

While the trees are dormant, the grower has a good opportunity of dealing with many insect pests. The dormant tree can be sprayed with stronger solutions and more toxic

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Tar Versus Oil Sprays Compared

The "chug, chug," of light petrol engines in spray pump outfits can be heard on all sides in the orchard settlement, as growers are hard at work spraying Peach trees with tar distillate to kill aphids, says the "Shepparton News."

Of all orchard jobs distillate spraying is probably the least sought after, as despite hoods of hessian or cloth, or one of the various kinds of masks, the drifting spray invariably seems to find its way in to the skin somewhere. Where it reaches the skin it causes severe burns. One man spent a fortnight in bed after a particularly severe burning last season, and already some of the orchard men show patches of burned skin around their eyes, which have to be left un-

covered, as glasses soon cloud with the spray.

The Best Defence.

The best defence against skin burns from the spray appears to be a heavy application of some kind of grease or lanoline on the face before starting the work.

Although tar distillate is a comparative newcomer amongst sprays, it has been adopted on almost all orchards in the district. A few orchardists, however, still condemn its use. One, an experienced fruit-grower at Orrvale, last week supported the use of red oil as a spray for Peach trees.

"Tar distillate," he said, "will only kill aphids, while red oil will kill both aphids and San Jose scale. I prefer to use the oil."

Results from Spraying

Tests by Department

THE Pakenham Upper Fruit Growers' Association met recently to hear a report from Messrs. Provan and Harper, of the Victorian Department of Agriculture, upon the results of spraying on demonstration plots on Mr. Woolf's Valley View orchard.

Although smarting slightly from the effects of tar distillate spray near his eyes, a Shepparton East Orchardist defended the distillate. "I admit that red oil will kill the scale," he said, "and it is certainly easier on the tree itself, but tar distillate is the only spray we have had here which will effectively get rid of the aphids."

Mr. Provan said that at Valley View the trees had been sprayed under a programme advocated by the Department for the control of Codlin Moth and Black Spot. In addition, some of the trees had been treated with 5 lb. of complete manure and 4 lb. of sulphate of ammonia, but it was not possible to determine any definite results from only one season's use of fertilisers.

Under the two-spray schedule adopted for Jonathans, Black Spot infection had been nil. Under the "A" schedule Codlin Moth infection had been 2.3 per cent. (comprising 1.3 per cent. entry and 1 per cent. stings), and under the "B" schedule 3.3 per cent. (2.1 per cent. entry and 1.2 per cent. stings). Black Spot infection of Yates and Delicious sprayed had also been nil. Codlin Moth infection of Yates had been 2.6 per cent. (1.5 per cent. entry and 1.1 per cent. stings), and of Delicious 0.66 per cent. (0.4 per cent. entry and 0.26 per cent. stings).

Lure pots were an important factor in determining the best time to spray for control of Codlin Moth and eliminating unnecessary sprays. The peak emergence of moths was on November 30, when the average catch per lure pot was 14. This was very low compared with the peak emergence in other districts, which was as high as 16. The cost of spray material per tree worked out at about 3d. for Black Spot and 2½d. for Codlin Moth.

Mr. Provan emphasised that the Department was eager to have the co-operation of growers in the conduct of the demonstration plots.

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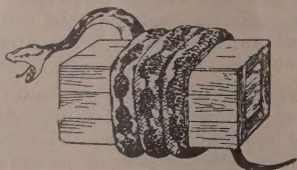
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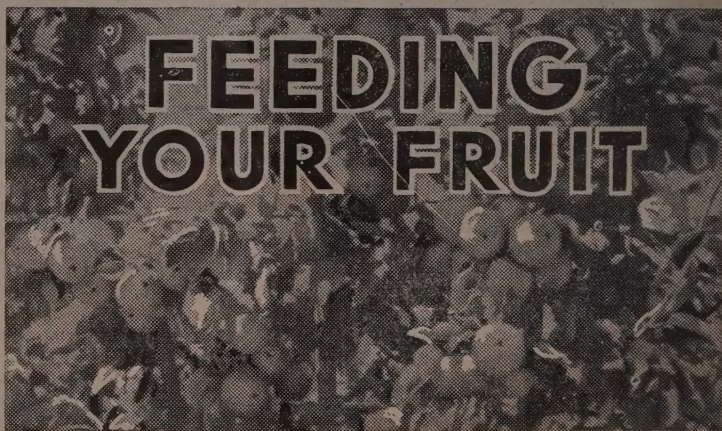
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Even if the crop fails the tree has drawn on plant-food reserves.

IF

fruit spur or terminal growth is short; the bark is tight—the fruit undersized and under-coloured; "Die-back" or "Rosette" appears on the terminals; leaves are pallid, limp or scorched on the margins;

THEN

the trees are under-fed with humus or fertiliser or both. Full grown trees need 10 lbs. of 2:2:1 a fertiliser mixture containing 10% POTASH. Smaller or extra large trees, need proportionately less or more.

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Fertiliser Starvation

Deficiencies That Can be Supplied

Eight Mineral Elements Necessary

By far the most important element in the fertilising of orchard trees is nitrogen, declares J. H. Weinberger, Assistant Pomologist, Maryland, U.S.A., in the latest issue of "Better Fruit." In the following article he explains why injuries are caused by fertiliser deficiency.

Nitrogen, phosphorus and potassium are the elements usually thought of as fertilisers for orchard trees. These are the elements that are most often lacking for plant growth in soils. However, there are eight other mineral elements which have thus far been found necessary for the successful growth of a fruit tree. If the soil lacks any one of these the trees cannot survive, and definite disorders or symptoms are produced in the tree, by which it is often possible to diagnose the cause of the trouble. A fertile soil must necessarily contain an available supply of all essential elements, and some orchard soils are deficient only in nitrogen.

In many districts the disorders caused by lack of one or more of these elements are of considerable economic importance. For example, yellow mottling of the leaves and rosette of Peach trees are cured by applying zinc sulphate to the soil. In South Africa 1 to 2 pounds of copper sulphate per tree are applied to the soil to overcome loss of green coloring matter and rosetting of Peach trees. In Florida, die-back of citrus trees is controlled by application of copper salts. Die-back and chlorosis of prune trees are associated with deficiencies of potassium in the soil. Leaf scorch of Apples is also associated with potassium deficiencies. In parts of California and Florida manganese is regularly applied to citrus trees to overcome chlorosis. In any part of the country trees on a high calcium soil may suffer from a lack of iron. Internal cork and certain types of cracking and drought spot in Apples are physiological disorders which are associated with nutrition.

Can be Produced Artificially.
It is possible to produce these deficiency symptoms under controlled conditions. In order to be able to identify them when they occur in the field, one-year-old Peach trees were grown in sand supplied with a nutrient solution in which a particular element was lacking. In this

way definite disorders were produced whose cause could be identified.

By far the most important element in the fertilising of orchard trees is nitrogen. This element is easily leached out of the soil and trees respond most readily to applications of it as a fertiliser. When the nitrogen supply in the soil is low, the trees lack vigor, terminal growth is short, few leaves are formed, and few fruit buds are differentiated. Leaves are small, yellowish green, much twisted and curled, and develop reddish tints and reddish brown spots. Leaf and blossom buds are slower to open in the Spring, and defoliation takes place earlier in the Autumn. The flowers are weak, often do not set, and if they do set, the fruits are apt to drop. The fruits ripen earlier, are smaller, and usually highly colored. Nitrogen starvation is apt to appear in sod orchards or on shallow soils. It is the most easily controlled deficiency, and seldom proves fatal to the tree.

Phosphorus and Potash.

Phosphorus deficiency on fruit trees has seldom been reported under field conditions. When Peach trees are grown in pure sand supplied with a nutrient solution lacking phosphorus, they stop growth early in the season, but appear perfectly healthy. The leaves are large, dark green in color, and have a tough, leathery appearance. They lack the bright green color of leaves on a vigorously growing tree. In severe cases shoot growth is small, leaves are small, and defoliation occurs early. Wallace reports that on Apples fruit size is reduced, as in nitrogen starvation, but the fruits are poor in quality and have a dull, bronze finish. In certain soils in England, where the phosphorus supply is so small that pasture plants cannot grow healthily, fruit trees show no sign of phosphorus deficiency. Apparently fruit trees are good phosphorus feeders.

When available potash is scarce in the soil, the effects on the trees are less drastic than nitrogen deficiency, but are more serious because of the difficulty of control. Terminal growth may be just as great on postassium starved trees as on others, but the twig diameter is smaller and the leaves are spaced farther apart, giving the tree a spindling appearance.



Illustration of leaves affected by deficiencies quoted in this article. Reading from left to right: 1—Complete leaf. 2—Deficient in potassium. 3—In calcium. 4—In magnesium. 5—In iron. 6—In nitrogen. 7—In sulphur. 8—In manganese and 9—In phosphorus.

ance. The distinguishing symptom of potassium deficiency is the "leaf scorch" which develops when the margins of the leaves die, and the dead tissue falls off in ribbons. In the centre of the leaf small spots of dead tissue appear also. The leaves are light green in color, smaller in size, and seem thin, brittle and papery. The edges of the leaves are curled inward. Sometimes a chlorosis appears on the leaves near the margins and between the veins.

With Apple trees, defoliation occurs early, the leaves at the tips dropping off first. In severe cases, the tips of the branches may die back. Blossom buds are formed and may set, but the fruits are small and of poor flavor. In mild cases potassium fertiliser application to the soil will correct the trouble, but in severe cases recovery is more difficult, and often death of the tree results. In any potash fertilisation, it is important that the fertiliser element be placed as close to the roots as possible, since the element is quickly tied up by the soil and rendered unavailable.

Lime Deficiency Rare in Field.

A simple calcium or lime deficiency of fruit trees does not often occur in the field. Calcium-starved trees grown in sand cultures have large, deep green leaves which tend to be stiff and to roll the edges inward. Late in the season a large area of dead tissue, usually in the centre of the leaf, becomes yellow and quickly dies. The injured leaf soon drops off. Shoot growth may or may not be normal. So far as has been observed with Apple trees, bark, blossoms and fruit are normal.

Magnesium deficiency symptoms

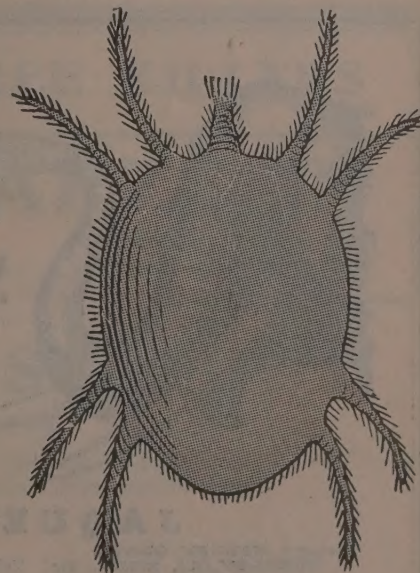
are quite similar to minus calcium symptoms, except they are more severe, and breakdown usually occurs in areas between large veins. Unless large amounts of iron are available, chlorosis is apt to occur also. Defoliation follows the appearance of breakdown in the leaves, the old leaves dropping off first. New foliage is continually being produced, but it too is soon affected and drops off. Apple fruits are woody and fail to mature because of lack of foliage.

Where iron is lacking or is unavailable in the soil, severe chlorosis results. The veins, as well as the areas between the veins, lose their green color and may even become almost white before they drop off. The leaves at the tip are lost first, as contrasted with the older leaves lost first on no magnesium treatment. Lack of iron under field conditions occurs frequently. It is most often observed where considerable calcium carbonate or limestone is found in the soils or in the rock from which the soil is derived.

Although the soil may be high in iron content, it may be rendered unavailable to the trees by the action of the excess lime. Iron chlorosis on Peach trees also occurs readily in sand cultures when potassium, calcium, or magnesium are lacking and iron supply is low. Under these conditions, if the trees are given either iron or one of the other elements of the trouble may disappear. The easiest method of furnishing iron to Apple trees is by driving nails into the trunk. The results are not apparent as quickly as if iron salts were placed in holes in the trunk, but recovery is as complete.

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is the most effective control for the red spider, bryobia mite and other sucking insects that spend the winter in the form of somewhat flattened spherical eggs. As these mites feed through sucking mouth-parts which pierce the epidermis of the leaf, a poison spray is unsuitable. They should be controlled by a contact insecticide—suffocated by Gargoyle RED Spraying Oil



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No disorder of fruit trees due to a lack of sulphur has been reported, and while trees are sprayed with sulphur for the control of diseases, there is likely to be none. However, sulphur is an essential element, and fruit trees growing in its absence soon stop growth. With Peach trees the terminals die and new shoots start out below the tip, which are small and produce only small, light-green leaves. These latter

assume red or orange tints. The older leaves turn light green resembling low nitrogen leaves, and later large areas of the leaves at the tips or margins, die, shrink and distort the leaves. Defoliation does not occur until late in the season.

Most soils contain ample supplies of manganese, and the cause of manganese deficiency disorders usually lies with certain soil condi-

tions, which render manganese unavailable to the plants. High lime content is a common cause, as with iron deficiency. With Peach trees, lack of manganese produces a dull, yellowish color on the leaves. Chlorophyll is lost from the areas between the veins but not from the veins, and the areas adjacent to them. Growth is stunted and the leaves drop prematurely.

Injuries Easily Overcome.

Internal cork and certain types of drought spot in Apples are rather widespread in occurrences, and appear to be associated with boron deficiency. Various workers in New Zealand, British Columbia, New York and the U.S. Department of Agriculture have reported success in the control of internal cork and drought spots in Apples by the use of 1/3 to 1/2 ounce of boric acid placed in holes in the trunk of large Apple trees, or by application of one pound of boric acid per tree to the soil. With Peach trees in boron deficient sand cultures, the terminals die back, lateral buds commence growth, and they also are soon affected. Small, irregularly-shaped areas in the leaf die and drop out. Injured leaves fall off readily. On the stem, dark brown corky spots appear, giving it a very rough appearance.

Applications of zinc to fruit trees have been successful in combating a disorder called rosette, or little leaf. The leaves are small, chlorotic, and branch growth is stunted, giving a rosette appearance. In severe cases the trees will die.

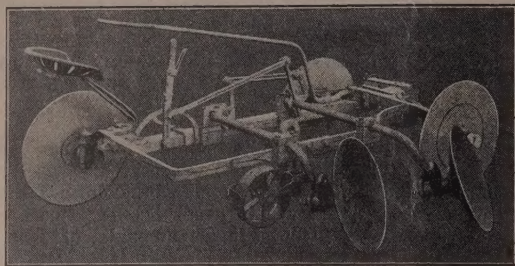
Copper deficiency has been observed on citrus trees in Florida, and Apples, Peaches, and Plums in South Africa. The leaves become chlorotic, the terminals are rosetted, and the twigs die back. Spraying the leaves with copper, or applying 1/2 to 1 pound of copper sulphate per tree to the soil readily corrects the trouble.

Of the 11 elements whose deficiency symptoms have been described, nitrogen is the one commonly lacking. The symptoms of lack of nitrogen are easily recognised. Available potassium is scarce on many orchard soils, yet no cases of severe deficiency and injury have been observed, although has been reported in Massachusetts and Canada. However, with available potassium low and lime content high, injury from lack of available iron may occur on fruit trees on certain soils. It is probably the first to be suspected if chlorosis occurs.

Physical injuries to trees which produce disorders resembling mineral deficiency chlorosis are common, and winter injury to the crown, moss injury, or disease, may be suspected. If no injury is apparent on an unhealthy tree, close examination of the nature and degree of chlorosis, the pattern of green and yellow areas, the appearance of dead areas in the leaf, the progress of defoliation, and the presence of twig injury may provide clues as to the cause of the disorder.

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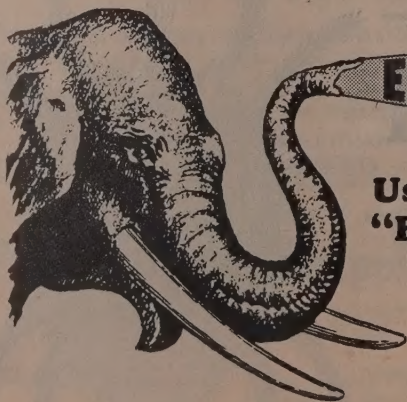
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Biennial Cropping of Apples

LIGHT AND HEAVY CROPS ALTERNATE

Manuring and Pruning Methods

BIENNIAL CROPPING, which means the tendency of fruit trees to bear a heavy crop every alternate year and light crops the intervening years, is probably the greatest factor against securing consistent crops, writes Mr. R. G. Milnion, Orchard Instructor, in the issue of the "New Zealand Journal of Agriculture."

Many varieties of Apples, principally those which are spur bearers, are affected by biennial cropping. This habit may first be brought about by any factor, natural or otherwise, which causes an exceptionally heavy crop in any year. Once the natural balance has become upset the cycle of biennial cropping quickly becomes established, and careful treatment is required to correct the trouble and again bring about average annual crops. To understand corrective treatment better a grasp of the causes underlying the cycle of biennial crops is desirable.

When the tree carries an exceptionally heavy crop, one which is beyond its normal capacity, the phenomenal demand made by the growing fruit seriously depletes the elaborated sap supply, and results in the mini-starvation of the developing fruit-buds. Consequent upon this mini-starvation, the majority of the fruit-buds remain undeveloped and fail to produce fruit the following season. During the season of the light crop the surplus of elaborated sap produces excessive bud-development, with a consequent heavy crop the following season, and so the cycle continues.

The apparent limiting factor is that of elaborated sap. This may be caused by lack of an adequate and available food-supply to the roots or by insufficient leafage to elaborate the available sap, or by both of these. The spur-bearing varieties, apparently because of their sparse leafage, are more prone to be thrown out of balance by a heavy crop.

An observation, amply supporting the contention that the biennial cropping habit can be overcome, was made possible by one grower who adopted the suggested treatment on apple trees in his orchard.

The variety, Dunn's Favorite, was selected for the purposes of the observational test, because it is considered to be one of the varieties most prone to be thrown out of consistent cropping. The particular trees were planted in 1914, and were well grown, being approximately 12 to 14 ft. high, and having a 14 ft. spread. The average number of leaders on a tree was in the vicinity of twenty-four. At the commencement of the observations the trees were heavily laden with short fruit-spurs, while practically no lateral growth was to be found. The trees had a rather exhausted and stagnant appearance. Annual manuring had been carried out, the trees receiving approximately 3 lb. of superphosphate and 2 lb. of bonedust each. Green manuring with blue lupins had also been commenced in 1928.

The method of improvement was by (1) increased manuring, continued growing and ploughing under of green crops, and by (2) an improved system of pruning. In the Winter of 1930 a heavy reduction was made in the number of spurs carried by the trees, approximately 50 per cent.

being cut away, and a commencement made in the reduction of the number of leaders by thinning out from three to four in each tree. The manuring was increased by 1 lb. of superphosphate per tree.

The following season was the "light" year, and a large amount of new lateral growth was produced. In the Winter this new growth was left uncut, while a further inroad was made into the remaining old spurs, and approximately 20 per cent. were removed. The leaders were reduced in most of the trees by a further two. The manuring was increased to 3 lb. per tree, comprising 6 lb. of superphosphate and 2 lb. of bonedust.

The second season was due in the cycle as a "heavy" year. With the heavy thinning of the fruit-spurs, followed by a heavy thinning of the fruit, the crop was reduced and approximately only 10 bushels per tree were carried. Extensive new lateral growth was made, while a heavy development of fruit-buds took place on the previous year's uncut laterals. At the Winter pruning approximately 30 per cent. of the remaining old spurs were cut away, and all new growth, except where crowding, was left intact. The leaders were again slightly reduced in numbers.

In the Summer of 1933 the trees now presented quite a different appearance, being liberally furnished with new lateral growth. The development of healthy buds had been extensive, and the promise was for a heavy crop in what would, in the old cycle, have been a "light" year. In the manurial programme an increase to 10 lb. per tree was made, which consisted of sulphate of ammonia 1½ lb., superphosphate 6 lb., and bonedust 2½ lb.

The following season turned out to be one of heavy crop, close on 20 bushels per tree being produced. The majority of the fruit was now being carried on the lateral wood. Despite the heavy crop new lateral growth was satisfactory. Since then, with the exception of one year when a late frost lowered the crop, cropping has been consistent, and this season sees

the fourth consistent crop of over 20 bushels per tree.

Each Winter the pruning has been on the same basis, that of cutting away the old and exhausted wood, and leaving the new lateral growth to take its place in the sequence of fruiting. The provision of lateral growth has provided the tree with increased leafage, and the benefit is to be seen in the healthy rejuvenated appearance of the trees. The manuring has been gradually increased, sulphate of potash being added in 1934 and since. Carbonate of lime, 12 cwt. to the acre, was applied in June, 1935. Last year's manuring consisted of 15 lb. per tree applied in August of a mixture containing fish manure, bonedust, and sulphate of potash at a ratio of 2:10:3, and in October with 4 lb. per tree of meat-meal.

As a result of this season's satisfactory crop, together with further satisfactory new lateral growth and good fruit-bud development, it is considered that these trees have now been established in consistent cropping. Other biennial cropping varieties in the same orchard appear to have responded in a like manner, and have reverted to annual average cropping.

In orchard practice it must be recognised that increased quantities of manure at times must be applied if heavy crops, together with sufficient new growth, are to be maintained. Increased manuring, however, will not correct biennial cropping or maintain consistent crops unless it is associated with the correct pruning practice. Briefly put, this consists, in the case of all Apple trees, of the removal each Winter of the older and more exhausted fruiting wood, and the spacing and leaving unshortened of all one-year-old lateral growth.

About 15,000 acres of land in Los Angeles County suffered extreme loss through the erosion of top soil in recent years. Plans are being made to control erosion.

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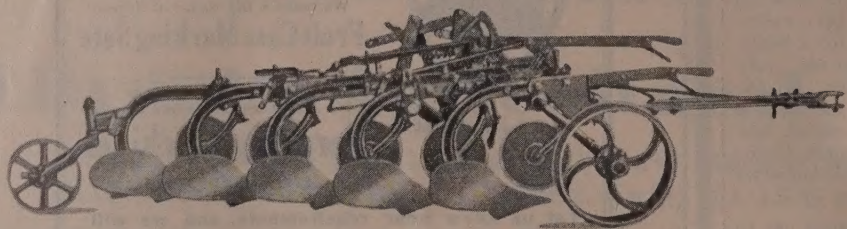
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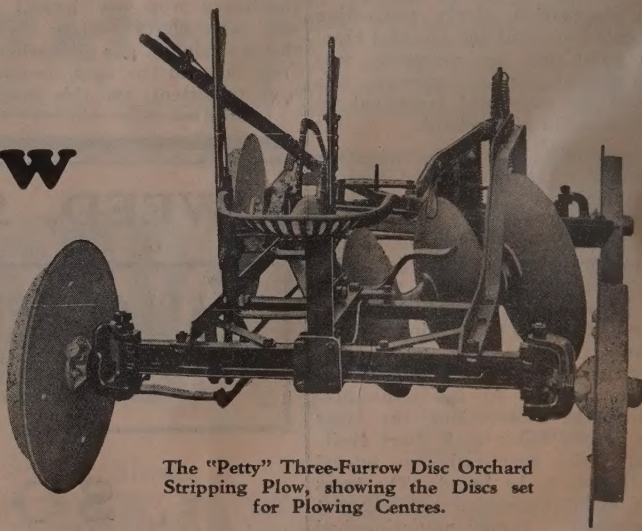
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the 700 cases of Australian fresh s that left Australia per S.S. "Brisbane Star" at the end of July e in London in the condition pro- id by the Elgin Gas Corporation, ydney, a new market will be ed overseas for Australian soft s.

is is the first time on record that attempt has been made to send ralian Tomatoes to England, and demonstration will be watched, only by Tomato growers, but by rowers of soft fruits hitherto ight impossible to ship such a ance.

he demonstration was made pose by the Blue Star Line Ltd. equip- g three special hatches with the distributing machinery invented manufactured by the Elgin Gas orporation Ltd., an entirely Austr- company with headquarters in ney.

he shipment comprises Oranges, ons, Mandarins, Passion Fruit Tomatoes. The Chambers have n sealed by officers of the Com- wealth Commerce Department the seals will not be broken ex- t in the presence of the Depart- t's inspector in London, who will ort upon the condition of the fruit n unloading in London. We un- stand that if the new method of storage in the ship's holds is ved entirely satisfactory, the Blue r Line will incorporate it into eral new fruit-carrying ships hich are to be built.

But this demonstration is not the t experiment made with the new ocess. The company has already uducted extensive tests, both their own plant and in the Muni- al Cold Storage Works in Sydney, d the tests are claimed to have n very satisfactory.

Mr. Frank Payne, a director and chief engineer of the Elgin Gas orporation, is travelling on the "Brisbane Star," and will be respon- ble for the control of the machinery d the conduct of the test en route. has been largely responsible for e perfection of the process during e operations and experiments un- rtaken by the company during the st three years. He has been en- ged in air conditioning engineering r the past 25 years, and in an interview granted to our representa- ve on board the boat, stated that ey anticipate a revolution in sea nsport of perishable foods as a ult of the invention of the new ocess.

In 1935, said Mr. Payne, following ecessful experiments carried out s a small scale in air-tight cabinets eir own plant, the Sydney City ouncil gave permission for the lgin Gas Corporation to carry out rther tests under commercial on- tions at the Municipal Cold Storage orks. Without going fully into the echnicalities of the process, the orking principle is the chemical tion of sulphuric acid on bicar- nate of soda creating carbon di- ide through a patent process that very scientifically worked out. lectric control, dehumidification, dis- tribution and circulation all come into e scheme. The gas is pumped into e sealed chambers, humidity and mperature are recorded and check- l several times daily, and the hole process is much more compli- cated than can be understood by the yman.

Some Early Tests.

The test fruits included Pears, Apples, Passion Fruit, Tomatoes and Grapes. They were commercial samples of ordinary quality. On the supposition that Tomatoes and Passion Fruit were the most liable to breakdown, the tests proved that Tomatoes stored for 25 days were found, upon removal, to be in sound condition and were afterwards kept for 7 days without sign of breakdown. After 21 days of storage, Passion Fruit showed no signs of withering.

Grapes in gas storage, when compared with similar Grapes under ordinary cool storage, held better and after 7 days after being removed from the gas chambers, showed no breakdown, whereas the Grapes from ordinary cool chambers were worth- less after 2 days. At that time the accurate control of gas, temperature and humidity was not as satisfactory as has since been obtained. Part of the object of the present demonstra- tion shipment is to make a careful study of the process under actual shipboard transportation.

Summary of Sydney Tests.

In reporting upon the results obtained from the Municipal tests, the following conclusions were arrived at:—

The condition of citrus fruits, Grapes, Passion Fruit and Tomatoes, treated with gas storage, was retained better than the control fruit in the refrigerated chamber.

Results with other fruit were only fair, but were sufficiently favorable to warrant further tests being carried out when better results could be expected.

Whilst many difficulties were encountered, arising from the unsuit- ability of the chambers used, and the variations in the quantity of gas used, these can be rectified by the

provision of special chambers and further experiments in the admixture of the gas.

The constant opening of the cham- ber for the purpose of taking gas readings and constant inspection of the fruit was detrimental to results. In the "Brisbane Star" all gas read- ings are done outside of the cham- bers, which are officially sealed, and are recorded and controlled by scien- tific instruments devised for the pur- pose.

What it Means.

Up to date, the experiments have proved that the Elgin process is superior to all ordinary refrigeration in that the natural flavor and appear- ance of the fruit is preserved, that there is less shrinkage, that it gives much longer out-of-store life, that the cost of storing is estimated at about 50 per cent. less than ordinary refrigeration, and that soft fruit, such as Tomatoes, Bananas and Passion fruit can be stored in gas with success over longer periods than by ordinary refrigeration.

The demonstration will be watched with keen interest, and, if satisfac- tory, the Elgin process opens the way for the shipment of fruits, not now exportable, to be carried long distances to the large overseas markets of the world.

The application of the system to other perishable foods has still to be worked out, but, on present indica- tions, it would appear that this Aus- tralian invention is one that will greatly affect the problem of food storage, and coincides with the at- tempt being made in many other countries to prolong the storage life, quality and after-storage condition of perishable foods. We hope to be able to report upon the results of the present demonstration shipment at an early date.

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ANSWERS TO QUESTIONS.

Storage Life of Pears.

We have an enquiry from Quan- tong along the following lines:—

How long should export Pears normally keep in cool store and be fit for export, if picked correctly?

What is the maximum length of time fruit should be in transit to cool store after being picked, in order to be in a fit condition for export?

The question was referred to Mr. G. B. Tindale, Cool Storage Research Officer of the Victorian Department of Agriculture, who gave the follow- ing reply:—

The cool storage life of several varieties of Pears at 32 deg. has been determined over several seasons, and has been found to be as follows:— Howell and Bosc, 3½ months; Pack- ham, 4 to 5 months; Josephine, 5 to 6 months; W. Cole and W. Nelis, 6 to 7 months.

These are the maximum periods for which these varieties, picked in a fully grown but immature condition, may be stored at 32 deg., and on re- moval to outside temperatures will ripen normally. If but slightly overstored, the Pears, on removal, fail to develop flavor or lusciousness,

The Codlin Moths' Worst Enemy—



Orchardists, who for many years have sprayed with "Aero brand" Arsenate of Lead, still say that it is the most effective Arsenate of Lead they have ever used.

Its exceeding fineness and lightness in texture, its high covering and killing power, the ease with which it mixes and remains in suspension in the spray tank, place "Aero brand" in the front rank of all Arsenates of Lead. Although of such superior quality, it costs no more than inferior arsenates.

Interested growers may obtain full particulars from the Manufacturers or from any of the Interstate Agents listed below.

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ARSENATE OF LEAD

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Buzacott & Co. Ltd.,
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Buzacott (Queensland) Ltd.,
443 Adelaide Street, Brisbane.

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Mechanically Perfect

Promotes Vigor

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GUARANTEED PURITY 98/99%

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Prevents soil acidity. Is completely soluble. The natural Nitrate Nitrogen being immediately available to the plant.

NOT A SINGLE GROWER WHO HAS USED IT HAS ANYTHING BUT PRAISE FOR CHILEAN NITRATE OF SODA.

Fruit Vegetables, Pastures

ALL MERCHANTS — ENQUIRIES,

Chilean Nitrate of Soda

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while if further overstored, they develop core-collapse, scald, darkening of the flesh and a very n flavor.

The periods stated above will very considerably reduced if Pears are not promptly cooled a picking, or if the storage temperature is above 32 deg. Pears, w picked, will ripen in a week if atmospheric temperature averages deg. Thus Pears picked on a Mon at Quantong during warm wea would be half ripe before reach Melbourne on a Thursday, and cool storage life would thus be reduced by half. This reduction would be so great in the case of the varieties with the shortest storage life as to make the export of the s under such conditions a most doubtful proposition. With Joseph Cole and Nelis, however, not only these varieties harvested later therefore during cooler weather, a reduction of 50 per cent. in cool storage life would still enable one to export them successfully. However, there can be but no doubt that the success of the export business has depended on the ability of the grower to promote cool his Pears after picking, w really means that the Pears should be cooled where grown. When cooled, a delay even of a week or awaiting packing and shipping then of no consequence.

With regard to the time in w Pears can be kept in cool store prior to shipment, this depends again variety. Those with the long storage lives could, of course, be much longer than the varieties with the shortest storage lives. While maximum periods have not been determined exactly, yet it is probable that the maximum time for Howell and Bosc would be one month for Packham and Josephine 2 months and for the W. Cole and W. N. three months.

COLD STORAGE OF VEGETABLES

Research in England.

The British Government is conducting experiments at Covent Garden into the storage and transport of fruit and vegetables, especially varieties not generally so treated. It is anticipated that new developments will be possible thereby, that new export trade from overseas will be opened up. By slight cooking Peas, it is expected that they can be carried long distances open up as fresh Peas. Very little modification from the usual storage given to meat will be necessary on ships.

A further feature demonstrated at the new laboratory which has been installed, is telling the age of Apples by the alcohol content, which increases as the Apple ages.

GAS STORAGE OF FRESH FRUIT

New Process for Melbourne.

A new company has been formed in Melbourne to operate, under licence, with a patent process for the storage of fresh fruit with gas. The company is styled Fresh Fruit Storage Limited, and 30,000 shares are being offered to the public at £1 each.

The new process is said to supersede ordinary refrigeration methods and to enable delicate fruits, which cannot now be successfully kept in cold storage, to be stored for long periods without loss of flavor or appearance. A demonstration plant has been set up to give practical proof of the claims made for the system, and it is proposed to erect a large plant for the treatment and storage of the fruit.

South Australian News and Notes

INCLUDING OFFICIAL NOTES AND REPORTS FROM THE SOUTH AUSTRALIAN FRUITGROWERS' & MARKET GARDENERS' ASSOCIATION.

Monthly Executive Meeting

THE monthly executive meeting of the S.A. Fruitgrowers' and Market Gardeners' Association, held on Friday, July 30, 1937, and excellent attendance was recorded. Mr. N. T. Hobbs, the Association President, occupied the chair, the following members were present—Messrs. W. J. Bishop, F. A. Hicks, F. Hughes, A. O. Petersen, C. Giles, C. Ragless, L. J. Wicks, W. Ind, G. T. Pitt, W. Parsons, R. Mond, W. A. Hersey, G. H. Hult, A. Huelin, M. Dawkins, J. Ts, F. Gill, A. Elliott, H. Walker, Ridley, M. E. Schache, R. Hunter, A. Cooke, G. Jennings, G. Parsons, J. Gore, R. Cobbleidick, H. Schoft, W. Curtis, D. Grigg, G. Maceth, Will Nicol, G. Strange, H. N. Hicks, J. Turner, A. E. Brealey, H. Schultz, E. Giles, H. J. Sharpe, J. Coulls, A. Hollister, G. Sharpe, Stanford, W. W. Miller, C. R. Bishop, T. Playford, M.P., and J. B. Adell.

Apologies were received from Messrs. C. J. Pitt and H. Robson. As a tribute to the memory of our late Secretary, Mr. W. J. Kimber, the meeting stood in silence for several minutes.

Minutes as sent out to members, were taken as read, approved of and confirmed.

Letter was received from the Department of Agriculture, setting out the activities of a beetle "Carpophilus hemipterus," which has been damaging "split stone" Peaches during the last two seasons, on the Adelaide Plains. Particulars of this beetle and methods to combat its activities, were on hand, and any member may obtain same by applying to the Assistant Secretary.

A report from the Department of Agriculture setting out the various quantities of fruits held in the different State Cold Stores, was read.

A parcel of trade publicity material signed for use in advertising Aus-

tralian products in the United Kingdom, was received.

Letters of condolence expressed to the Executive, in loss of our Secretary, were received.

Letter from Mr. A. R. Hilton, of the Agricultural High School, Mitcham, was received. Mr. Hilton will address the next Quarterly Educational Meeting to be held on Wednesday, August 18, in the Association Board Room.

Letter received from Messrs. Arthur Yates & Co. Ltd., also two very interesting publications. It was decided that Messrs. Yates & Co. be authorised to forward these books to members interested.

The new rail schedules and train departure timetables were issued to members interested in same.

Discussion was given to the annual meeting to be held on last Friday in September. It was decided that the annual meeting be conducted on the same lines as the Interstate Fruitgrowers' Conference held last year; a conference lasting all day, interspersed with a luncheon at midday. It was decided to hold the annual meeting as previously the last Friday in September, which this year would be the 24th. Arrangements for the conference was left in the hands of a subcommittee comprising the President, Vice-President, Messrs. Randell, Turner, Staniford, L. Wicks and Ron. Beck, Assistant Secretary.

Items for the agenda for the annual meeting were invited, Mr. F. Hughes moved "that a sub-committee be formed including our legal adviser to revise the constitution of the Association, and present the revised constitution for discussion and consideration at the annual meeting." Seconded by Mr. G. Jennings and carried. It was decided that sub-committee consists of a delegate appointed by each section and branch with three members of executive.

The appointment of Secretary was given consideration, and it was decided to call for applications through the press. A further special executive meeting was called for Friday, August 13,

Mr. G. Strange reported on Celery Section's activities. Quantities had eased off considerably, and prices being returned were satisfactory to growers.

Mr. F. G. Gill reported on the Tomato Section's arrangements for the coming season.

Many members gave expressions of sympathy to Mrs. Kimber and family and acknowledged the great work done by our late Secretary in building up such a positive force as our Association is in the industry at the present time.

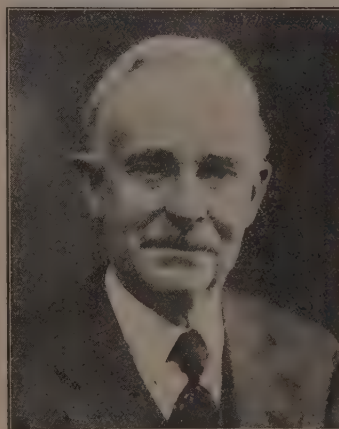
A vote of thanks was passed to the Assistant Secretary, Ron. Beck, for his able assistance, rendered since the death of Mr. Kimber.

VALE — W. J. KIMBER

ALL SECTIONS OF THE FRUITGROWING AND MARKET GARDENING INDUSTRIES PAY TRIBUTE TO THE LATE MR. KIMBER'S UNTIRING EFFORTS.

With the recent passing of Mr. W. J. Kimber, the fruit and vegetable growers of South Australia lost not only a very conscientious Secretary, but a good friend indeed. His loss will be mourned by many, but particularly so by the members of the South Australian Fruitgrowers and Market Gardeners' Association. Under the guidance of Mr. Kimber the Association emerged from a state of inactivity and apathy, to attain the strong and paramount position it holds to-day.

For a long time to come, when the development is referred to, Mr. Kimber will be remembered. To a very large number of Association members, Mr. Kimber was more than a Secretary in the accepted sense—he was also guide, philosopher and friend to them. During the developmental stages of the Organisation the path to success proved to be by no means a rosy one. Success in anything



The Editor and Staff
of the
"Fruit World and Market
Grower"

deeply regret the passing of
Mr. W. J. Kimber and express
their sympathy to his relatives
and the South Australian fruit
industry in their great loss.

means that tremendous difficulties have to be encountered, and surmounted, and Mr. Kimber had his share of troubles and difficulties in connection with his Association work. His strength of character and honesty of purpose proved to be, however, his greatest asset, and assisted him through many a difficult period. Apart from the fact that Mr. Kimber's work was his main interest, he had a liking for hobbies.

As a conchologist his ability and knowledge was well respected, and he was also a field naturalist of no mean ability. Mr. Kimber had one of the best shell collections in Australia, and was a member of the Shell Club, and the Field Naturalists' Society. For many years Mr. Kimber was a director of the South Australian Fruitgrowers Co-operative Society Limited. In the words of Mark Twain: "Praise is well, compliment is well, but affection—that is the last and final and most precious reward that any man can win, whether by character or achievement." —"C.W.M."

Tribute by the President, S.A. Fruitgrowers' and Market Gardeners' Association :

To increase the membership of an Association from 70-700, to build a practically defunct body to a powerful organisation, controlling the export of thousands of tons of produce annually, supervised by adequate market representation in the eastern States, in the comparatively short term of eleven years is no mean achievement.

To be approached for advice on many questions relating to fruit production and marketing, as well as on private matters by men in all walks of life, is almost unique.

To have made a friend of almost everyone with whom he came in con-

tact is given to very few. Such is the record of the late Mr. Walter J. Kimber, whose death is recorded with extreme regret and a very real sense of loss.

His unflinching tact, his ready courtesy and keen insight into the problems of the fruit and vegetable growers have placed him high in the esteem of primary producers in this State.

Mr. Kimber's organising ability, coupled with extraordinary success as an administrator and a deep consideration of the welfare of every grower, has enabled him to achieve great things for co-operative effort in S.A.

NOTICES.

Quarterly Educational Meeting.

The Third Quarterly Educational Meeting will be held in the Association Board Room on Wednesday, August 18, at 8 p.m. These quarterly meetings have aroused considerable interest among members, and it is hoped that a good attendance will be recorded at this one.

Mr. A. R. Hilton, of the Agricultural High School, Mitcham, will deliver an address, entitled: "Agricultural Education in U.S.A. and South Australia," and will be illustrated with many lantern views.

Remember the date: Wednesday, August 18, and bring any friends that may be interested.

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HOWARD'S COLLOIDAL SULPHUR

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The Association to-day faces an acute crisis.

Can Mr. Kimber's work be continued? Voluntary co-operation has accomplished much. Much, however, remains to be done.

Mr. Kimber's passing constitutes a definite challenge to our fidelity. Let

us not allow his influence to pass.

Every grower a member, and member loyal, would be a fitting tribute to the memory of a very gentleman, who has for many devoted his talents and energy to the betterment of others.

N. T. HOBBS, President

Tributes to the late Mr. W. J. Kimber

by all Sections of the Industry

FOR over eleven years Secretary of the S.A. Fruitgrowers' and Market Gardeners' Association, the death of the late W. J. Kimber will be regretted, not only by South Australian friends, but by many others in the fruit and vegetable industries who came into business relationships with him. Mr. Kimber died in his 74th year on the morning of July 11. The funeral was attended by representatives of every commercial organisation and a procession of cars, two miles long, was reported.

Up to 1926, Mr. Kimber was a commercial fruit grower at Klemzig, when he became Secretary of the Association. It can be said that his contribution to the industry was great, and his personal help to growers is a record of his unselfish devotion to his later calling, as represented in the commercial side of fruit and vegetable distribution.

In his private life he was prominent in Church life, having been a leader in the Church of England Men's Society and Superintendent of a Sunday School for many years. He also took great interest in Literary Society work. He was also an authority on sea and land shells, and in 1918 was elected a Fellow of the Royal Society of South Australia.

As expressing their respect for the late Mr. Kimber, the following appreciations have been received:—

SECTIONAL TRIBUTES.

The successful operations of the S.A. Fruitgrowers' and Market Gardeners' Association are due in no small measure to the formation of Sections for each particular type of produce, Sectional Committees working harmoniously with the central Executive.

The influence and energy of the late Mr. Kimber were largely responsible for the extension and success of this

method. The scope of his work, the esteem in which he was held by all growers is strikingly illustrated by the following tributes.

N. T. HOBBS, President

The Office Staff.

Our late Secretary's guidance, friendship with the whole of the office staff, proved the greatest factor towards a perfectly harmonious understanding between employer and employee. His advice and assistance was freely given and was evidenced by the example set by himself.

He took a personal interest in each member of the staff, made his regard by us that of a friend, more than that of an employer. On behalf of those employed by the S.A. Fruitgrowers' and Market Gardeners' Association, I can only regret the death of such a Christian gentleman.—Ron R. Assistant Secretary.

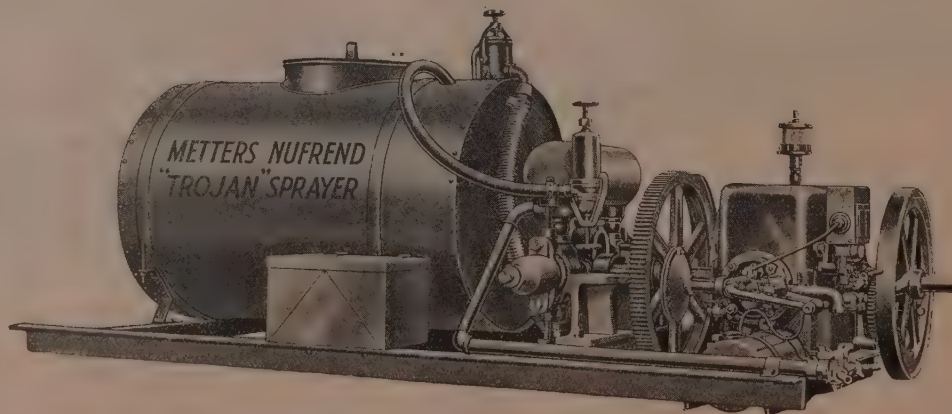
The Celery Section.

The late Mr. Kimber has been one of the biggest guiding factors in the success of the Celery Growers' Section. He has been the Secretary of the Section since its inception, proved to be thoroughly reliable, a very great asset to the smooth running of it, sometimes through difficult times.

He had a personal interest in each individual grower, and made it his object to assist them in any way possible.

He proved most advantageous to the consideration of the Advancement of Celery on Interstate Markets, which has, over the last four years, been carried out on a very big scale, the sums expended on advertising year running into hundreds of pounds.

Metters' Nufrend "Trojan" Power Sprayer...



Specifications:—2-h.p. petrol engine, speed 500 r.p.m., direct coupled to Nufrend Spray Pump. Vat of 50 gallons (approximate capacity) fitted with rotary agitator, mounted on welded steel frame. The plant is equipped with a Metters Automatic relief valve, suction with removable strainer, double cock, 2-25 lengths of 1/2-in. special spray hose, direct and nozzles. The pressure may be regulated and set as required up to 250 lb.

Capacity:—Pump is capable of delivering 200 gallons of mixture per hour at a pressure of 200 lbs.

Weight:—6 cwt.

PRICE £75

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her tributes to the late Mr. W. J. Kimber

lised that with the increasing of tion a great increase in con- tion had to be made, and ad- ing was the means of doing it. ry member in the Celery Sec- regrets his passing, and the industry is poorer without G. J. Strange, Chairman.

Tomato Section.

osing the late Mr. W. J. Kim- s Secretary of this large and tant Association, the Tomato n have suffered a great loss. He een associated with the Section the time of its inception, and een always willing and striving e best interests of the growers. ill be hard to find a successor ow in his footsteps. Thoroughly l, he was at all times most eous, and never had an ungentle- y thought. His work among the o growers has been thoroughly ciated, and he was one of the g links that held them together. dk. G. Gill, Chairman.

Cherry Section.

Chairman of the Cherry Section, st express, on behalf of all our bers, the profound sorrow felt e passing of our beloved Secre- His interest in our particular on was equally as great as that n in every other phase of fruit ing and market gardening. success we enjoyed uplifted while our setbacks were felt by just as keenly. Well do I re- oer how last season's adverse her conditions worried him, per- more than the actual growers of fruit.

Vice-President of the Associa- I wish to pay tribute to his erving devotion to duty, and his disregard of self where his job concerned. To him, more than ne else, is the success of our ciation due, and no more fitting te to his memory could be made for us to ensure the continued th and success of that body.

a personal friend, I must say much one misses his cheerful e and friendly advice. He was of nature's gentlemen, and to known him was a privilege. few years ago his passing would proved an irreparable loss to the ciation; but so well has he built to-day his memory should be an iration to go on to still greater ess.—W. J. Bishop, Chairman.

F. & M.G. Society Ltd.

the passing of Mr. W. J. Kimber ves one of the kindest and e highly respected men in the e industry. His unflinching cour- abundant tact and invariable e temper endeared him to all his ciates. He came prominently e Association at the most cal period of its existence, and his enthusiasm and untiring gy, built it into a strong, virile nisation. When the time arrived a further development of its act- by the creation of a trading ty as part of the Association, Kimber again entered whole- tedly into the scheme and be- e the first Secretary of the new ty. He was an intense believer e value of co-operation.

s' association with other co- tive societies has proved his h, and he was of invaluable help afting a constitution that would rve the true co-operative spirit e Society. Without murmur he ldered the increased work and d responsibility that the new e are entailed, and during those l stages gave unceasingly, his efforts, that it might prove suc- ul. Its growth and development itself a lasting tribute to his e. He was respected by all who

knew him, but to those who worked with him in the organisation, and who had the opportunity of assessing him at his real worth, he became a friend indeed.

The industry mourns the loss of one who during those latter years of his life gave so unreservedly of his finest powers, and sacrificed so many hours of leisure that he might build an organisation that would remain, and an organisation that would prove its worth to all associated with it.

His work stands as a monument to his untiring energy and a lasting tribute to his life.—F. C. Staniford, Chairman.

Fruit Pool Society.

The members of the Board of the S.A. Fruitgrowers' Fruit Pool Society Limited deeply regret the passing of the Secretary, Mr. Kimber. Having been a fruitgrower himself, he understood the difficulty in disposing of big crops of preserving fruits in glut seasons, and showed his sympathy in a practical way by his untiring efforts in seeing the fruits were processed and sold to best advantage.

Few realise the many long hours Mr. Kimber spent working for the growers of stone fruits and Tomatoes, and with great success, due to his wonderful organising ability and keenness; nothing was too much trouble.

Mr. Kimber was first associated with the Fruit Pool in February, 1931. The Board then decided to obtain an advance from the Rural Credits Branch of the Commonwealth Bank to cover the cost of processing Plums and Tomatoes. On May 20, 1931, the Secretary reported that 35 tons of Plum pulp and 103 tons of Tomatoes had been processed on behalf of the Pool. This fruit realised to the grower 2/3 per case for Plums and 1/9 for Tomatoes, while on the market growers were being offered 9d. per case.

In 1933 another glut fruit crop occurred, and it was decided to pulp on the growers' behalf 50 tons of Plums and 50 tons of Tomatoes, also to get an advance to cover costs of canning 100 tons of Duchess Pears. The above quantities of fruit were processed and helped the local market considerably, by taking a great deal of the surplus fruit. In 1934 word was received from London that the sale of export canned Pears had been disastrous, owing to the market being flooded with cheap American fruit. It was a great worry to Mr. Kimber, and many Board meetings were held to consider the position and alleviate the growers' position, as much as possible. On April 24, 1935, a grant was received from the Commonwealth Government to assist fruit growers. The Board was then able to pay growers all fixed prices for their fruit.

The last meeting of the Fruit Pool Society was held on May 27, 1936, when the finalising of all matters in connection with the Pool were dealt with. Growers can hardly realise the benefit to the market the processing of this glut fruit has been to them. Only the Board know the tremendous amount of work Mr. Kimber had in connection with it.—J. Turner, Chairman.

Vegetable Section.

Mr. Kimber was known to the older members of the Hills Growers' and Market Men's Association from the time of his appointment to the Secretaryship of the Fruitgrowers' and Market Gardeners' Association, before the amalgamation of these two important organisations.

Mr. Kimber's advice and assistance was often sought by market gardeners, and was given freely.

Although members of the Hills Growers' and Market Men's Association were in no way connected with the larger body, Mr. Kimber did all in his power to assist all those engaged in the industry.

His unselfish work with the producer is instanced by an occurrence some five years ago, when the Secretary of the Vegetable Growers' Organisation was seriously ill; Mr. Kimber was of material assistance to the President and Committee in the maintenance and smooth running of that body.

His assistance was always sought when the annual social was held, and his advice materially assisted the success of these gatherings. Through his untiring efforts over the last seven or eight years, the amalgamation of these two bodies was brought about, which has since proved so beneficial to both sides.—Will. Nicol, Chairman.

Soft Fruits Section.

Although the Soft Fruit Section is the youngest Section of the Association, members of this have been in constant and intimate touch with our late Secretary during the period he acted as Honorary Secretary of the Campbelltown Branch. Being well known as a soft fruit grower in his early days in the industry, he quite realised that this particular branch of growers needed a separate Section to govern and overlook their interests. His tactful and reliable assistance was passed on to the younger members engaged in the industry, who benefited considerably from his experience. His Association with the Fruit Industry Sugar Concession Committee, assisted the Committee of the Soft Fruits Section very materially, as he was so well versed in its working and principles.—Frank Hughes, Chairman.

From the Marion Branch.

It is with deep regret that we record the passing of our late Secretary, Mr. W. J. Kimber. By his unequalled knowledge and meritorious services to the various branches and the Association he attained a high regard by all members. For many years he made it a practice to be present with some of his executive officers at the annual meetings of the Marion Branch. His genial presence was highly appreciated by all members.

His cheery word will now certainly be missed by his many friends.—Ray Duncan, Secretary.

Barmera Branch.

Although growers in the Barmera District are situated 150 miles from Adelaide, they realised that organisation was essential to orderly marketing, and after discussion with the late Mr. W. Kimber, it was decided to form a Branch of the Association in Barmera.

Mr. Kimber's tolerance and tactful perseverance, with many difficulties that arose in the formation and smooth running of this Branch, was keenly felt, and after a very short time the Branch proved a definite asset to growers in this River district.

His association with the Barmera growers was not only noted for his untiring efforts in organising the industry as a whole, but for the personal interest he took with the individual grower's dealings.—J. J. Elliott, Chairman.

Cudlee Creek Branch.

In the passing of Mr. W. J. Kimber, we feel that we have lost a friend and, although we wish his successor every success, we think it will be hard to find someone to fill the vacancy. He was a man of friendly nature; but with a determination that helped him to gain the heights he did in solving

the problems of the fruitgrowers.—Roy B. Pritchard.

Salisbury Citrus Growers' Branch.

In the passing of Mr. W. J. Kimber we feel that not only have we lost one of the best Secretaries; but we have lost a friend. His relationship with those he met daily in the way of business was not simply that of an official carrying out certain specified duties; but as a man full of understanding of the many difficulties faced by those whose calling brought them into frequent contact with him. Not only did he understand the troubles besetting the producers; but he had more than an ordinary fellow feeling with them, which led him to spend himself to a degree perhaps beyond his strength in his unremitting efforts to render marketing more profitable and equitable.

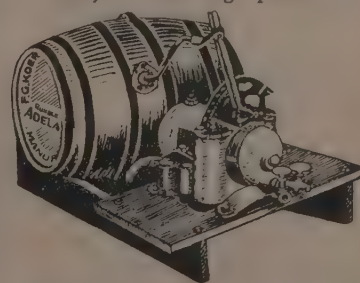
The late Mr. Kimber combined within himself to a remarkable degree many excellent qualities; qualities more or less evident in a general way, but not too often gathered into one personality. To mention some of these attributes by name; we think of reliability and say "Yes, that was Mr. Kimber, without any reserve," and we are equally as emphatic when we speak of courtesy or friendliness or industry or straightforwardness or self-effacement. These supplemented with wide knowledge, proclaim a man who must in the nature of things have exerted a wide and powerful influence. There is that which has pervaded our late Secretary's general conduct of business, which would perforce tend to create a finer atmosphere. There may not have been adequate consciousness of it while our friend was with us; but being now better able to estimate the nature of his impact upon the business community with which he came in contact in an official capacity, we are ready to believe that the influence which he exerted while with us, will not wholly be lost now that he is no more.

The labor involved in producing from the soil is heavy and continuous; but marketing has a greater element of anxiety attached to it than even the growing of crops, and the minds of producers are being continually exercised in the direction of finding better systems of market regulation to institute a more equitable ratio of prices between producer and consumer. It is one of the most difficult of problems, particularly in reference to citrus; it has been a task beyond the ability of those directly engaged in the industry, more especially since the heavy increase in supplies occasioned by the abnormal planting of this fruit along the

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MONOHYDRATED COPPER SULPHATE for Celery, Tomato and Potato Blight.

BORDEAUX POWDER for Spraying. Save the bother of mixing Bordeaux Mixture.

COPPER CARBONATE for Dusting and Pickling Seeds and Wheat.

F. A. BLAIR - Thebarton, South Australia

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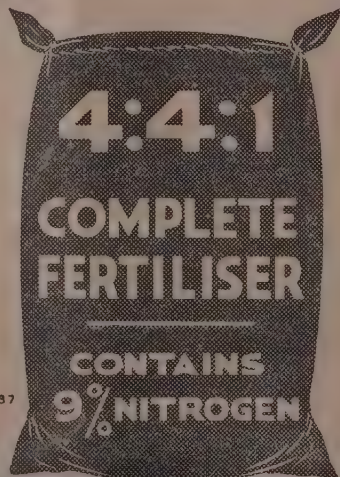
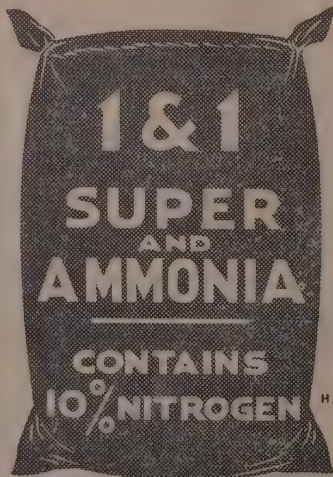
IT PAYS TO USE MORE AMMONIA

**SOILS LACK NITROGEN
IN WINTER**

THAT'S WHY

**SULPHATE
OF
AMMONIA**

**IN MIXED FERTILISERS
SPELLS SUCCESS**



WESTERN AUSTRALIAN TOMATOES.

Three shipments of West. Tomatoes have already been received this year, and supplies are increasing. The first shipment opened up well, although later a disease developed in much of the fruit. This has also occurred in connection with later shipments, causing a good deal of waste. As yet the disease has not been diagnosed. The supplies have been in excess of the demand—largely because of the very cold weather—opening selling rates were up to 1/- for the best repacked ripe lines, but with increased consignments, prices declined sharply to 6/- to 8/- per half case.

MELBOURNE CELERY MARKET.

The Melbourne Celery market was reasonably firm throughout July, when price levels were much more satisfactory than at any other period during this season. The market was assisted considerably because supplies from Adelaide were reasonably light, and the fact that vegetables of all varieties were in rather light supply, with consequent high prices. On the other hand, better prices for Celery were not obtainable because, in the main, the general quality was indifferent, much of the Celery being far too green. This was, of course, caused by climatic conditions in growing areas, which made "blanching" exceedingly difficult.

Tributes to the late Mr. W. J. Kimber—(continued)

Murray, not to mention other areas. The difficulty has not been quite so great the last few years owing to heavy exports to New Zealand.

The late Mr. Kimber took up his duties at a time when Australian markets were mainly relied upon to absorb the increasing citrus production. The endeavour to get a fair return for the grower while the market was glutted and often demoralised, was one which our late Secretary put his time and energy into, with the zest which characterised his efforts in many other directions. For some years, mainly due to his activities, the growers in Salisbury acknowledged their indebtedness to him for effecting rises in prices which made very welcome increases in income. The late Mr. Kimber was a source of valuable information, which was always readily available to all enquirers, and nothing ever seemed too much trouble to him in his constant desire to give assistance to those in the industry. In co-operation with Mr. McRostie, he has opened a profitable market in Melbourne for Poorman Oranges, which promises to make that branch of the citrus industry more payable than it has been the last few years.

That we shall miss Mr. Kimber as Secretary and as a friend seems superfluous to write. His best monument will be the expressed and silent regard in which he is held by all who were privileged to know him.

We take off our hats to the memory of a gentleman.—E. Moss, Secretary.

Torrens Valley Citrus Growers.

The late Mr. W. J. Kimber's work for the citrus interests of the Adelaide Plains was on a par with the work which he did for the larger number of growers comprising the whole of the South Australian Fruitgrowers' and Market Gardeners' Association.

When Mr. Kimber took up the work of General Secretary of the organisation, its affairs were at a low ebb, membership was small and its voice carried little weight, but under his wise guidance it became a powerful body and he lived to see a very great advance in the general welfare of the industry in which his life's work was centred.

In spite of the enormous amount of detail work which his secretarial duties entailed, he was always willing and eager to do anything asked of him to assist in the smooth running of the various sections of the parent body, often at considerable inconvenience to himself. The citrus growers of the Torrens Valley will always remember his vital interest in their problems and very many valuable suggestions came from him, for

the betterment of conditions or increasing consumption of their products. Though often overtired by long hours at the office, he was always cheerful and happy to do the little bit, and many a time he organised a general meeting or combined meeting of growers when inclination and reasons of health must surely have advised a quiet evening by the fireside, but he never spared himself, and I sometimes wonder whether this zeal for his job was not have been a contributing factor to his untimely end. However, he died in harness as I knew he wished to do, and it now behoves all interested in the industry to keep his memory green by an endeavor to make and keep the organisation in which he was so interested, a "Powerful" association with a fair deal for which was his aim at all times.

We mourn his loss, but he has left an organisation which stands as a memorial to his energy and wise administration, and though there were naturally those who, through diversity of business interests, did not agree with his opinions, there is none who would not say "And passes one of Nature's greatest gentlemen."

F. A. Wicks, Secretary.

Paracombe Branch.

I write a few words of appreciation concerning the services rendered by the Paracombe Branch of Fruitgrowers' and Market Gardeners' Association by the late Secretary, Mr. W. J. Kimber. Our Branch was formed in 1912, so you see we have been associated with the late Secretary during his period of office, and we know that our very existence is the result of his optimistic leadership and self sacrifice. We acknowledge many reforms brought about by Mr. Kimber's efforts.

As an Apple-producing centre, our business is mainly directed locally, therefore the Paracombe Branch has not had the contact with the late Secretary which many other Sections were privileged to have.

We remember with gratitude the help given in the preparation of documents when building the Paracombe Fruitgrowers' Co-operative Society Ltd. packing shed. It was an inspiration to see Mr. Kimber's pleasant face as he appeared at Apple packing competition in connection with the Torrens Valley School exhibition. He presented the coveted "Jennings Shield" to the winning school, the Association trophy to the boy or girl who gained the highest marks. We are thankful for what he accomplished, and we regret his passing. He will be greatly missed. May his mantle fall upon some worthy man.—A. E. Brealey, Secretary.

THREE VARIETIES IN ONE APPLE.

Jonathan, Rome and David.

An interesting freak was recently reported from Geelong. It appears that a Jonathan Apple tree, 25 years old, on the property of Mr. F. Mullins, at Leopold, produced an Apple which had three distinct varieties. Half of the Apple was a Jonathan, part of the remainder was a Rome Beauty and part a King David. Each section is clearly defined from stem to tip and as regular as if sections of the three varieties had been spliced into one whole fruit. It is stated that in the orchard the Jonathan trees are several chains away from the Rome and David trees.

MEMBERS!

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SAFE HANDS OF THE
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South Australia

Mid-Murray Notes

VO METHODS OF PRUNING — BUREAU ANNUAL
EETING — THE NITROGEN CYCLE — LAND TREAT-
ENT — PRUNING CHAMPIONSHIP — RENMARK'S
COMMUNITY HOTEL.

VING IS NOW in full swing
d while examining the
eneral appearance of vines.
that all varieties are in good
nd should show a good crop
coming year. Sultana canes
of fruiting buds where cover
ive been consistently grown.
ng Sultanas, there are two
adopted, both having some-
recommend them in special
ances.

Pruning Methods Described.

irst method is to leave only
canes to enable the vine to
a normal crop. It will be
hat some vines of sub-normal
are only able to carry 4
while good vines will carry 6
nes.

second method of pruning is
to deal with vines of excep-
gior, in which case as many
e left on the vine as can be
within pruning radius, and
y be as high as 14 to 16.
t has been found that each
is satisfactory provided it is
telligently, but it sometimes
s that a grower will adopt the
system of pruning on vines of
y vigor only, with the result
e extra crop the vines are
upon to produce will be of
quality to those of a lesser
of rods. Furthermore, in the
ar's crop will be found lack-
fruiting buds, by virtue of the
at the sugars have been used
nature the heavy crop, and not
at remain to feed the embryo
which should be forming in
d at the time of year when
is maturing. The careful
will on no account allow his
o overbear, because a reaction
evitably follow in the next
Brown stains on most of the
ndicate that an attack of
may be expected during this
if the weather is charac-
by intermittent rain.

e is also more than a sugges-
at the same applies to Black
Sultana rods trailing on or
he ground are pitted, with
markings, which indicates
pores are in abundance and
e of producing a good deal of
e should a wet Spring follow.
having used the acid-iron
treatment when a Spring in-
on is anticipated, I have now
ned this in favor of spraying
ouble-strength Bordeaux mix-
rior to bud burst, and follow
with ordinary strength soon
the new bud is about 6 in.
Unless the weather is par-
ly bad, the next spray is given
fter the fruit is set, to which
ed arsenate of lead as a set
ainst the grub of the Light
Apple Moth, and last year col-
sulphur was added to the
ux bunch spray as well, to
r the effect of oidium.

Report of Annual Meeting.

annual meeting of the Ren-
North and Chaffey Agricul-
Bureau was held on July 13.
lection of officers resulted in
Moss again occupying the
n of President. Mr. J. C. K.
m, Secretary; Committee,
C. Sowden, L. Le Leu, B.

Davies, L. Woods, D. Weste. The
President presented the prizes won
at the Burcan Dried Fruits Show,
which were as follows:—Apricots, B.
Davies; Cold Dipped Sultanas, W.
Giles. This trophy has now been
won three times and is now the pro-
perty of the winner. Hot Dipper
Sultanas, L. Le Leu; Currants, D.
Winder. This trophy has been won
outright by Mr. Winder.

Creation of Soils.

Following the distribution of prizes,
Mr. O. Gepp, B.Ag.Sc., Agricultural
Adviser to the Nitrogen Fertiliser
Co., gave an address on the nitrogen
"cycle" in nature. The speaker dealt
with the creation of soils right from
the beginning of time, and explained
how the weathering effect on rocks,
plus the effect of the rays of the sun,
frosts, etc., gradually disintegrated
the rock particles, which in this way
formed the basis of all soils.

As plant life came into the soil,
organic matter gradually became in-
corporated with the soil particles.
A fertile soil is more than a dead
mass of rock, with the addition of
organic matter, but is also the home
of countless millions of different
forms of microscopic organisms,
which we call bacteria for the sake
of simplicity. These bacteria per-
form a very important part in the
fertility of the soil, said Mr. Gepp.
After dealing with the necessary
mineral plant foods, the speaker
illustrated, by means of a blackboard,
the rise and fall of the nitrogen
availability to plants of various
kinds at different times of the year.

Mr. Gepp quoted from results ob-
tained by the Waite Research In-
stitute in Adelaide on their work of
nitrate determination as affected by
clovers and cereals, and further re-
sults on nitrate fluctuations were
quoted from research work at the
Merebein C.S. & I. Research Station,
showing that a definite nitrate
shortage existed in early Spring,
from bud burst until the nitrates
from cover crops became available
in November. A vote of thanks was
moved and seconded by Messrs. B.
Davies and R. Fisher to Mr. Gepp
for his extremely interesting
address.

Land Treatment.

Some amazing results have been
achieved by a few growers on land
considered too poor to even offer an
economic proposition on Block E in
the Renmark Irrigation Area.

When the land was originally
allotted no indications were evident
that the land possessed a hard pan
almost impervious to the effect of
irrigation water, and root action.
After many years of unsuccessful
working, the land was classed as un-
economic, and many acres went out
of cultivation. Subsequently, how-
ever, many growers acquired blocks
of this land adjacent to their own
holding and applied heavy dressings
of gypsum and planted lucerne. The
lucerne had to be repeatedly planted
to get a proper stand. After allow-
ing lucerne to grow for several years,
the land was ploughed to a depth of
1 ft. by means of sub-soil ploughing.
Later on the land was ditched to a
depth of about 1 ft. 6 in., and left
open to aerate for a year, and planted
to vines.



ADVERTISING FRUIT.

An attractive window display by C. H. Beardmore, Box Hill, Vic.

The growth and returns from this
land is now amazing, producing 10
tons of Doradillos per acre, 2 tons of
dried Sultanas and Currants per
acre. After planting to vines, cover
crops were planted in every row for
several years, and the land has now
attained such a degree of fertility
that it is considered necessary to
confine cover cropping with legumes
to every alternate row in future.
The mechanical and physical condi-
tion of this soil has undergone a re-
markable change through the effects
of years of lucerne and cover crop-
ping, but it has meant hard work, of
which the growers are justly proud,
and the proudest of them is Mr.
"Jim" Pethick, whose untiring labors
has given him tangible results.

Pruning Competition.

The annual pruning competitions
held in the River Areas, under the
direction of the Agricultural Bureaux,
are always keenly followed. This
year's championship was held at
Waikerie on July 1. Before entering
the championship class, contestants
have to win a position for qualifica-
tion in the local centres, so that a
distinction of merit is stamped on
each grower entering the champion-
ship.

The competition was held on the
orchard of Mr. L. W. Andrew; Mr. E.
Leishman acted as judge, with
Messrs. J. Virgo and F. J. Elliot as
consultative judges. The outstand-
ing performance of A. E. Milde, of
Mypolonga, in winning both tree and
vine section is a performance rarely
witnessed.

The result of the championship is
as follow:—

Vine Section.

	Gordos.	Currants.	Sultanas.	Aggregate.
A. E. Milde	88	91	107	286
C. Curtis	88	90	106	284
W. H. Harris . . .	91	92	97	280
T. Battams	85	90	103	278
R. Loxton	89	88	98	275
F. G. Fox	88	87	100	275
R. Isaacson	85	89	100	274
C. Bachm	89	86	98	273
K. Shepherd	90	88	91	269
E. Prosser	83	83	103	269
H. Tucker	88	82	96	266
J. Simpson	83	84	90	257
S. Sanders	81	80	90	251

Tree Section.

	Apricots.	Peaches.	Pears.	Aggregate.
A. Milde	95	87	88	270
W. Bachm	92	87	85	264
T. Battams	80	89	87	262
E. Prosser	90	90	82	262
W. H. Harris	88	84	90	262
F. G. Fox	82	85	91	262
W. E. Rout	86	89	84	259

R. Isaacson	84	84	87	258
J. Bachm	80	89	87	256
S. Sanders	85	71	85	251
R. Loxton	85	79	84	248

As there was a prize for the
highest points for the vine section,
and another for the highest points
for the tree section, and still a valu-
able cup for the highest aggregate
points, Mr. A. E. Milde won all three
trophies, one of which was donated
by the Dried Fruits Board, and an-
other by the Royal A. & H. Society.
Mr. F. Fox was runner-up in the
aggregate.

Community Hotel.

June 26 proved a red letter day in
the history of Berri, one of our
neighbouring irrigation settlements,
this being the ceremony of the open-
ing of yet another community owned
hotel on the River. Renmark was
the first hotel in Australia to be
owned by the community, the profits
of which go to various charitable in-
stitutions, municipal improvements,
educational purposes, etc. In recent
years other hotels at Barmera and
Loxton and Berri have been either
built or acquired by the community
from private owners. The ceremony
of opening the Berri Hotel Associa-
tion Incorp. was performed by Mr. A.
J. Lee, President of the L.V.A.

Mr. O. E. A. Kunoth, Chairman of
the hotel, in his opening address,
mentioned the fact that the acquiring
of the hotel by the community con-
stituted the realisation of a dream of
many years' standing.

The co-operative and community
spirit is strong in all River settle-
ments, and it is fitting that Berri
should join the other South Austr-
lian irrigation settlements in the
ownership of an hotel owned by the
people for the benefit of the people.

Community Spirit.

A further incident to indicate the
community spirit in these areas took
place in the form of a working bee
to help prune a block owned by a
grower suffering from paralysis, and
who has been unable to do any work
for over a year.

About thirty growers met at the
block of Mr. Archie Braund last
week and finished his pruning in a
day. Such an act cannot be gauged
by monetary considerations alone,
but the underlying spirit of comrade-
ship and willing help means a good
deal to an afflicted man. Morning
and afternoon tea was supplied by
Mrs Braund and the neighbouring
ladies.—"Nemo."

WOOD WOOL
Finest Grade for Export Fruit.
STRAWBERRY BOXES.
and Fruit Containers.
Prices and Particulars on Applica-
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AUSTRALIAN BERRY BASKETS
CO.
175 Kent Street, Richmond, Vic.
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South Australian Fruit Marketing Association

Report of July Meeting

MR. J. B. RANDELL presided over a full meeting of delegates at the meeting of the Executive Committee of the S.A. Fruit Marketing Association held on July 30. Those present were:—Messrs. R. G. Hannaford, A. O. Petersen, F. F. Redden, P. R. B. Searcy, H. N. Wicks, M. G. Basey, J. B. Randell, E. S. Mason, S. M. James, A. G. Strickland, D. Norsworthy, A. R. Willsmore, and the Secretary. Apologies were received from Messrs. H. J. Bishop, W. W. Miller and T. Playford.

Correspondence included:—

Letter from the Minister of Agriculture, advising that the Government grant to the Apple and Pear Publicity Fund had been increased from £150 to £350, and that the Commonwealth had advised that they would pay a £1 for £1 subsidy on the £350 and also on the £150 to be donated by this Association.

Letters from Department of Agriculture, enclosing 25 copies of extract from Journal of Agriculture dealing with shipment of Williams Pears from this State to the United Kingdom during February last, also sets of trade publicity material designed for use in advertising Australian products in the United Kingdom. Another letter

giving the export regulations under the Federal Commerce Act.

Letter from Mr. J. P. Piggott, general manager, Port Huon Fruit Growers' Co-op. Association, asking for names of South Australian Freight Committee. The Secretary advised that list had been forwarded.

Letter from Batlow Packing House dated July 21, advising they had accepted the shipping companies' offer to compromise the case in connection with which an appeal was pending to the High Court of Australia, and asking in view of the fact that they would be a considerable amount short of their costs, that we allow our contribution to stand. It was agreed that this should be done.

Letters from the Australian Apple and Pear Export Council, enclosing report from Mr. J. B. Mills, from London, also a report and minutes of conference of meeting with the A.O.T.A. in Sydney from June 8 to 10. A further letter advising receipt of a cable from Mr. J. B. Mills, confirming date for next annual conference of the Australian Apple and Pear Export Council, to be held in Sydney, commencing Monday, October 25, and asking for subjects for the agenda paper as early as possible.

Items to be set out in the form of resolutions. Members were asked to bring forward at the next meeting matters they desired to have considered at the conference.

The Secretary read minutes of meetings of the Advertising Sub-Committee for the information of members, together with correspondence in regard to the various forms of advertising in operation and pending. It was resolved: "That the Committee approve of the recommendation of the Advertising Sub-Committee, that the Association should meet the cost of purchasing and distributing Apples and recipe books to schools."

Mr. H. N. Wicks reported that at the meeting of the Research Sub-Committee reports had been received in regard to Geeveston Fanny and Willie Sharp Apples, and matters discussed were: Spraying programmes, manurial experiments, control of pests. In regard to hail insurance—this matter was being actively taken up and every endeavor was being made through the Agricultural Bureau to devise some workable method of arranging for insurance. Information was also being obtained from the other States.

Mr. Price had given a demonstration of a patent stud for preventing movement in 2 and 3 piece timbers on cases. Members were very impressed with the invention, and Mr. Price was arranging to demonstrate it at the annual Apple and Pear Council Conference in Sydney in October. It

was considered by members that, providing the supplies of local timber were available, it should prove most valuable invention.

Report of June Meeting.

The President, Mr. H. J. Bishop, occupied the chair. Minutes of May meeting were approved, and financial statement was received.

Publicity Campaign.

Correspondence with the Minister of Agriculture in regard to the contribution towards the Apple and Pear Publicity Campaign was submitted, also letter giving information in regard to the fruit at present in cold store and in district, which, together with the actual export and estimated consumption at the beginning of the season, showed that the total marketable crop of Apples was 723,000 cases, and as grant had been based on a figure of 460,000 cases, it was considered an additional grant should be made.

The matter was discussed at length and the following resolution was finally carried unanimously:—"That if the South Australian Government will increase their contribution to the Apple and Pear Publicity Campaign to £500, the South Australian Fruit Marketing Association will provide £150, conditionally, that this amount plus the Commonwealth subsidy, used in this State for advertising, it was then agreed to ask Mr. Price if he would arrange for Minister of Agriculture to receive deputation, consisting of him, Messrs. H. J. Bishop, J. B. Randell and H. N. Wicks to enable the resolution to be placed before the Minister.

It was also agreed that the Secretary should write to the Apple and Pear Export Council advising that work was being done in regard to trying to get an increased grant from the Government, and requesting information as to when the advertising campaign would commence. Also to point out that members assume that amount made available in South Australia, plus the Commonwealth subsidy, would be spent for advertising in South Australia. It was pointed out that South Australia would not likely to get any advantage from increased consumption in the Sydney market, and it was essential to increase consumption in South Australia to absorb the S.A. surplus.

Advertising Committee.

It was unanimously agreed that an advertising committee be formed, consisting of Messrs. H. J. Bishop, F. F. Redden, H. N. Wicks, J. B. Randell, F. B. James, P. R. B. Searcy. Committee to deal with the question of advertising as soon as the necessary funds are available.

Research.

Research sub-committee reported that Mr. Strickland had agreed to his Departmental officers should undertake to fill gaps with wood and by means of rubber stamps indicate on the label that the cost of short count, due to inspection requirements, where it had been necessary to take fruit out of cases for cut for examination. As the Department had no responsibility in the matter, Mr. Strickland asked the Association arrange for the supply of wood wool and rubber stamps. The research sub-committee recommended the approval of this suggestion at the meeting agreed to this.

Other matters considered were: Hail Insurance: Information obtained from all the States in regard to this matter.

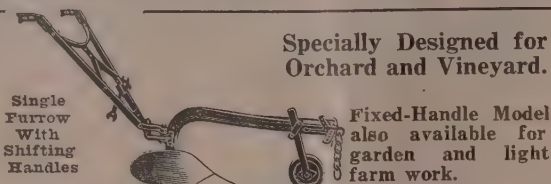
Geeveston Fanny Apples: A list is being obtained from Tasmania of the results in the past from the Apple.

Willie Sharp Apples: Mr. Strickland is obtaining information from other States and New Zealand for submission at the next meeting.

The Perfect Plough

For Every Condition is in the unrivalled range presented by

Sunshine Massey Harris

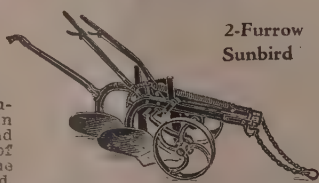


SUNBIRD

Mouldboard Ploughs . .

1, 2, or 3 Furrows.

Sunbird Ploughs are popular for general ploughing in most varieties of soil, and the exceptional amount of clearance, coupled with the design of the mouldboard, which turns the sod without packing it, makes them specially suitable for turning in weeds or green manurial crops. They are extremely strong, and have polished mouldboards 19 inches long. Single-furrow has shifting handles for ploughing close up to trees and vines; or fixed handles if preferred. Furrows 9 inches wide to 6 inches deep. Two and three-furrow sizes also plough close to trees. Light draught; easy to handle.



2-Furrow Sunbird



Sunbuster Drill Plough.

For making drills, furrows and drains.



Sunvine Plough.

Saves hand hoe weeding in the vineyard.

Ploughs underneath vines in the row. The mouldboard is set well out on nearside. Handles bear away to offside. Horse and man walk clear. Adjustable fender rod protects vine stems. Weeder blade available, also long handles for orchard work.

Special leaflets give full details of each implement. Ask the local agent, or write direct.



Sunkid Pony Plough

Very high clearance. Splendid for hilling up potatoes, maize, cotton, etc., and for general garden and small farm work. Cuts furrows 7 inches wide. Overall length, 6 feet.



Single-Furrow Plough.

A high clearance plough for deep work. The board has a very "lazy" turn at the top, causing it to scour well. Particularly recommended for work in clay and other heavy soils.



New Model Orchard Plough.

With Movable Handles and ample draught range, both vertical and horizontal. Splendid for orchard, vineyard and field work. Has 21 in. clearance at throat. Mouldboard, 22 in. Share, 6 in. or 8 in.



Massey Harris No. 10 Two-Horse General Purpose Plough.

Does splendid work in hard soils. Cuts furrows 7 to 9 inches wide, 5 to 8 inches deep. Good clearance. Has wooden handles.

H. V. McKAY MASSEY HARRIS PTY. LTD.

Sunshine Harvester Works, Sunshine, W20, Vic.—Also at Melbourne, Sydney, Adelaide, Perth, Brisbane

Murrumbidgee Irrigation Areas

History and Development

. . . OF THE . . .

Fruitgrowing Industry

Development in the Production of Citrus, Deciduous and Vine Fruits

THE GROWTH OF THE FRUITGROWING industry in the Murrumbidgee Irrigation Areas of New South Wales, like other irrigation areas of the Commonwealth, is a fine example of the value of intense culture. It is estimated that ten acres of irrigated intense fruit culture employs as many persons as 5,000 acres of dry pasture.

Some idea of the debt owing by Australians to pioneers of water conservation and irrigation in Australia is gathered from the flourishing orchards and cities which have sprung up in the Mirrool and Yanco Irrigation Areas of New South Wales. The capital invested by the Water Commission in these areas is approximately eight million pounds. The annual production from farms on the M.I. Areas is now over one million pounds.

Murrumbidgee Irrigation Areas of New South Wales represent one of the most important irrigation undertakings in Australia. The source of water is the Murrumbidgee River, in which a large concrete dam has been constructed at Burrinjuck, with a capacity of 33,612,671,000

channels provide municipalities with water for pumping into the towers from which the towns are reticulated.

The capital invested by the Water Conservation and Irrigation Commission which controls these areas is approximately £8,000,000, the capital having been invested in the following manner: — Burrinjuck Dam,



PICKING GRAPES FOR THE WINERY.

annual production of wines on the Areas is estimated at 1½ million gallons. (Photo. by John P. Carney, Griffith, N.S.W.)

feet (771,641 acre feet); the maximum depth of water is 200 feet, area of the water surface 12,780 i. greater volume of water is imbedded than is contained in the Sydney Harbor.

This huge enterprise was commenced in 1905 and seven years afterwards the first water was supplied to the town of Yanco, about five miles from Leeton. Water is stored principally during Winter and Spring months, released during the irrigation season, September to April inclusive. The water passes along a river channel for about 240 miles to Beremba, where a weir across the river turns it into the main channel, which at its offtake has a capacity of 600 cubic feet per second. The main channel has been completed beyond Griffith, a distance of 96½ miles from the offtake. These waters are carried by gravitation per channel to the rice fields, citrus groves, orchards, lucerne paddocks and rural farms at Leeton, Griffith and surrounding districts. In addition, the

£1,734,255; Berembend Weir and Main Canal, £1,333,009; development works, channels, drains and roads, £2,446,923; land acquisition, advances to settlers, factories for settlers' produce, muni-



A typical productive Citrus orchard in the M.I. Areas. (Photo. by John P. Carney, Griffith, N.S.W.)

cipal undertakings, rolling and working plant, stocks, etc., accounting for approximately £2,400,000.

Development of Fruitgrowing.

The adequate supply of water, combined with other natural facilities, have resulted in the steady development of the production of citrus, deciduous and vine fruits in these areas. At the present time there are approximately 19,823 acres under orchards and vineyards in the Murrumbidgee Irrigation Areas in various stages of growth made up as follows:—Deciduous, 7,798 acres, citrus, 5,903, and vines, 6,132. Latest fruit production figures available are for the year ending June, 1936. These are set out as follows:—

Citrus Fruits.

The estimated production of citrus fruits during the year under review was 620,400 bushels, made up as follows. *Yanco (includes Leeton and surrounding districts); †Mirrool (includes Griffith and surrounding districts).

Type.	*Yanco. Area. Bush.	†Mirrool Area. Bush.	Total. Bush.
Washington Navels .	106,000	195,000	301,000
Valencia, Late . .	98,000	126,200	224,200
Lemons .	37,000	25,000	62,000
Other . .	10,200	23,000	33,200
	—	—	620,400

Deciduous Fruits.

Apricots.—The following are the approximate yields for the 1935-36 season:—

	Yanco Area. Tons.	Mirrool Area. Tons.	Total. Tons.
Sold for fresh fruit trade .	750	440	1,190
Apricots, dried .	210	870	1,080
Sold for canning purposes . . .	1,400	1,444	2,844
	—	—	5,114

Peaches. — The Peach Crop was very satisfactory, although not a record for the Areas. The total yield was as follows:—

	Yanco Area. Tons.	Mirrool Area. Tons.	Total. Tons.
Canning fruit .	4,800	3,089	7,889
Dried fruit . .	30	190	220
Fresh fruit . .	1,050	690	1,740
	—	—	9,849

Prunes.—The production was estimated as follows:—

	Yanco Area. Tons.	Mirrool Area. Tons.	Total. Tons.
Prunes (dried weight . . .	109	448	557
Prunes & Plums sold fresh . .	170	40	210
	—	—	767

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It has been proved beyond doubt that crops need something more than nitrogen, phosphorus, and potash. Natural healthy growth depends upon other elements as well—boron, iodine, and magnesium, for example. That's where CHILEAN NITRATE scores. Being a natural fertiliser, it contains these other elements in addition to nitrogen. And its nitrogen is in the nitrate form—just as plants take it up.

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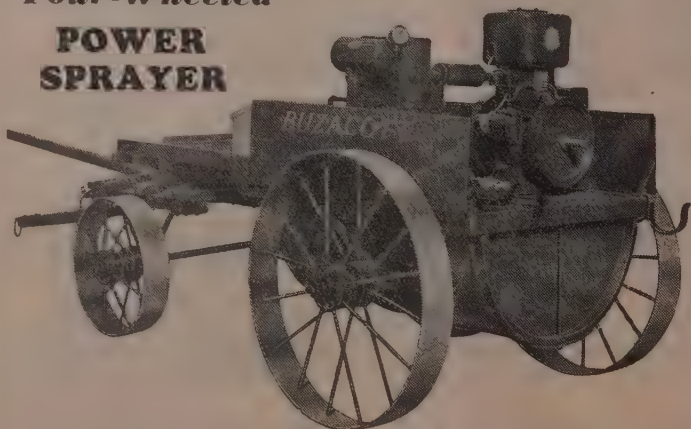
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AREAS AND PRODUCTION—(Continued).



Bridge over the Main Irrigation Channel at Griffith.

Pome Fruits.—Estimated crops for the season under review were as follows:—

Type.	Yanco Area. Bush.	Mirrool Area. Bush.	Total. Bush.
Apples—			
G. Smith .	42,000	78,000	120,000
Other var.	7,000	12,000	19,000

Pears—	Tons.	Tons.	Tons.
Canning .	280	120	400
Fresh fruit	184	100	284
			684

tons for the previous year. Approximately 1,893,000 gallons of were made. The quality of the was excellent, and the wineries growers an average price of \$ per ton.

The crop was vested in the W Grapes Marketing Board, which exercised control over the industry the Murrumbidgee Irrigation Ar since December, 1932.

Apart from the Board's work improve and stabilise prices, a g deal of effort has been put forth wards the improvement of the dustry generally.

Dried Fruits.

The Wine Industry.
Owing to the favorable conditions experienced by vignerons, the yield of wine Grapes was 14,561 tons, compared with a harvest of about 10,000

The following is the estimated quantity and value of dried fruit duced on the Areas during the 1935-36, compared with the acti production for 1934-1935:—

Dried Fruit.	Cwts.	1934-35.	Cwts.	1935-36.
		Estimated Value. £		Estimated Value. £
Apples and Pears	79	120	—	—
Peaches	982	1,350	882	2,058
Apricots	4,066	12,198	3,600	12,600
Prunes and Plums	9,501	13,300	11,140	16,710
Nectarines	22	33	60	140
Sultanas	1,845	2,583	7,680	11,520
Lexias	82	117	220	308
Currants	796	1,114	1,400	1,750
Figs	402	362	1,000	900
Almonds	1,442	5,793	3,000	12,150
Totals	19,217	36,970	28,982	58,130

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Thousands in Use
It earns its Famous LOW PRICE in a Few Days
Write for Catalogue

Summary of the Types of Fruits and Varieties Grown in the Murrumbidgee Irrigation Areas

Summary of the area and products outlined above give an idea of the diversity of the industry in the Murrumbidgee Areas. Almost every type of fruit is grown in these areas, of course, from tropical fruits, to the following summary of varieties of Fruits Grown in the area.

Fruits.—Oranges (Washington, Late Valencia), Lemons (Lisbon), also Manihads and Citrons.

are represented by Phillips, Queen, Pullar's Cling and

ts.—Soil, climate and other factors are most suitable for the culture of Apricots, and it is estimated that the Murrumbidgee Irrigation Area is now the largest of Apricot production in the Empire. Large quantities of Apricots are forwarded to London and Sydney markets for the fruit trade, apart from the quantities that are dried and sold for other purposes. The varieties grown are:—

but for prices obtained on shipments forwarded to Great Britain and the East. For the year ending June, 1936, the demand for Pears of the Williams variety for canning purposes was in excess of supply. Considerable new plantings have been made, but it is estimated it will be several years before the production of the M.I.A. is sufficient for the needs of the New South Wales canneries.

Almonds, Figs and Quinces are also grown quite successfully by various growers. Varieties of Quinces grown are Van Diemen's and Masters Early. In addition to the fresh fruit trade, Quinces are dried and quite a good sample is obtained. Quinces are cut into slices, dipped into salt water, sulphured and put through the dehydrator. Almond plantings are covered by the varieties Brandes Jordan, I.X.L. and Nonpareil.

Figs are grown quite successfully and find a ready sale. Varieties planted include Adriatic, Smyrna and Capri.

Rice Growing.

Following on successful experiments by the Water Conservation and Irrigation Commission some years ago in the growing of rice, this



A NICELY LAID-OUT VINEYARD.

Over 6,000 acres are planted in the Areas to Table, Raisin and Wine Grapes.

rally in the vicinity of 20,000 acres, yielding some 40,000 tons annually, supplying the whole of Australia's requirements and leaving a small exportable surplus, is an indication of the rapid strides which the industry has made since its inception.

A Rice Research Station, established by the Department of Agriculture at Yanco, is giving careful attention to such matters as seed selection, weed control and rice farming methods generally. It is estimated that since the rice industry commenced in these areas, approximately 277,880 tons have been produced, the gross value of which is estimated at approximately £2,668,600.

General Population.

The estimated population of the Murrumbidgee Irrigation Areas is 16,900; approximately 8,000 reside on the Yanco Irrigation Area, the centre of which is Leeton, and 8,900 on the Mirrool Irrigation Area, the centre of which is Griffith.

The important part played by irrigation in decentralisation is amply demonstrated in the two flourishing towns which have sprung up at Leeton and Griffith. The town of Leeton is situated about 370 miles South-west of Sydney, and 265 miles north of Melbourne. Leeton is 460 feet above sea level, with Griffith 35 miles away to the north-west, having a fall of 1 ft. to the mile to the latter place. It will easily be realised from this how all this country lends itself to irrigation, add to this its sunny climate and fertile soil, and the value of these areas will be realised.

Leeton.

The layout of the town of Leeton may be likened to a wheel with the monument as its hub. This is near the centre and highest point and the land slopes away in all directions, ensuring

perfect natural drainage. The main streets represent the spokes which meet at the monument. The main streets are named Pine-avenue, Wade-avenue, Kurrajong-avenue, Chelmsford-place, Wilga-street, Grevillea-street, Willow-street.

Circling the hub from small to large are streets and avenues intersecting and connecting all the main thoroughfares. These crescents are named after the trees by which they are planted, namely, Jarrah-street, Cedar-street, Palm-avenue, Acacia-avenue, etc.

Leeton rightly claims a model layout, with all parts easily accessible in every direction. One very important factor to remember is that this beautiful garden town has been built up directly through its surrounding rural industries, comprising the immense fresh, dried, canned fruit and citrus industry, wheat, rice, wool, meat, poultry, butter, etc. It has been asserted that ten acres of irrigated intense fruit culture employs as many persons as 5,000 acres of dry pasture.

The outstanding buildings in Leeton of interest to fruitgrowers are the large canning factory capable of turning over 120 tons of fruit per day and the cool store attached to the cannery, which has a capacity of 30,000 cases. The Leeton Cannery was taken over from the Government by the growers some two years ago, and is now controlled by the Leeton Co-operative and Cool Stores Company. The cannery processes approximately 200,000 cans per day. The products of the cannery, which include canned fruit, jam and sauces, are marketed under the Golden Areas brand. A large export trade has been built up with the United Kingdom as well as with New Zealand and Canada. The present directors of the company are G. Enticknap (Chairman), J. Baulch, R. Mallinson, J. C. Thorne, Y. Longhurst,



CULTIVATING A PEACH ORCHARD.

Approximately 4,000 acres are devoted to Apricot and Peach growing.

es.—Most of this type of fruit is grown on the Irrigation Areas for canning purposes, although large quantities are used for dry-fruit purposes, also sold as fresh fruit. Varieties grown include Phillips, Queen, Pullar's Cling and

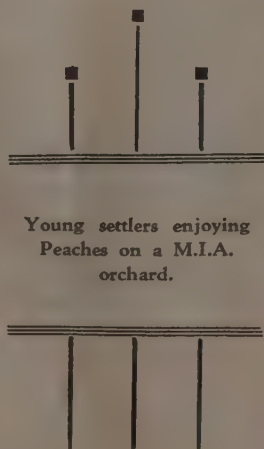
es.—Conditions are generally satisfactory for Grape growing, in addition to growing vine fruits as Sultanas, Currants and the Chanez variety of Grape which is grown satisfactorily and shipped in considerable quantities, mainly to Eastern ports.

annual production of wine in the Areas is estimated at approximately 1,250,000 gallons. There are five wineries, in addition to numerous individual wine-making for the treatment of the Grapes, which average about three-quarters of the total production in

es.—In both Yanco and Mirrool areas prune growing is increasing, quantities being produced for canning purposes and others are sold as fresh fruit. D'Agen and Robe are the varieties which are giving the best results.

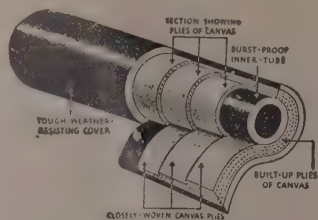
es.—Fruits.—Apples and Pears are rearing in production in these areas. The Granny Smith Apple variety is giving good results, not only from a production point of view,

industry has now come into prominence on the Areas, and has gone a long way towards a solution of the problem of utilisation of heavy class soils. In order to regulate production, the Commission, in consultation with the Rice Marketing Board, fixed the maximum area to which water will be made available on individual farms, bearing in mind the Australian market requirements. The fact that the annual sowing is now gene-



Young settlers enjoying Peaches on a M.I.A. orchard.





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The Leeton Cannery is capable of producing over 120 tons of fruit per day.
Since its establishment £659,000 have been paid to growers for fresh fruit and
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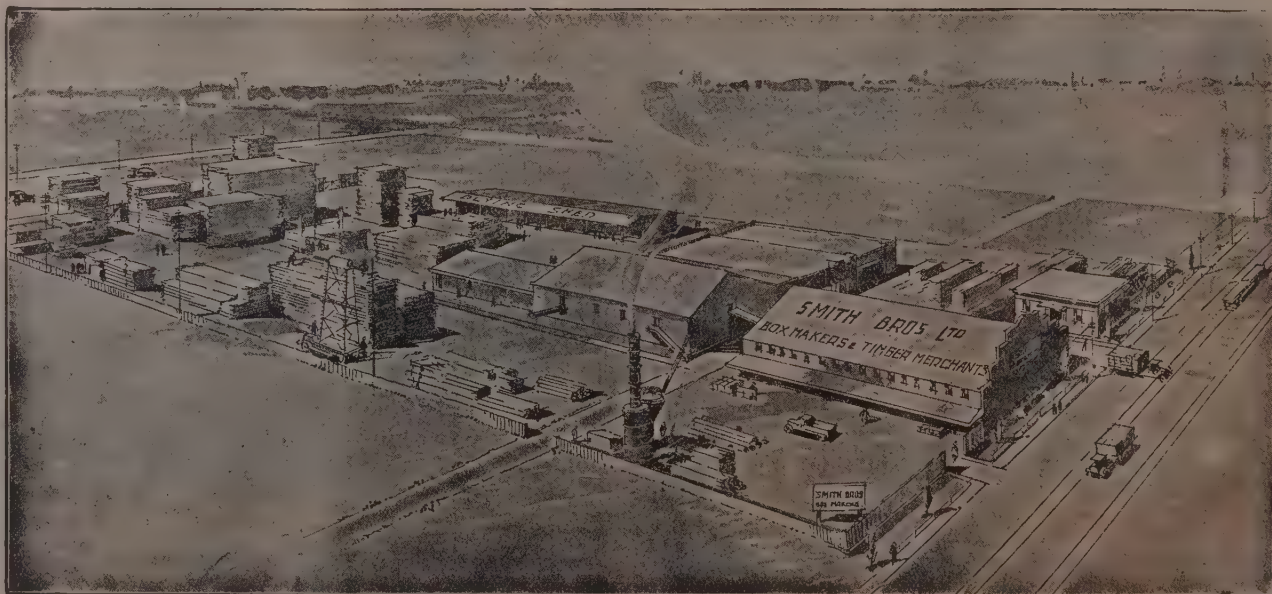
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Irrigation Area Enquiries to Josling and Snaith, Local Agents, Griffith.

Development of Griffith and Surrounding Areas

CITRUS AND DRIED FRUITS, APRICOTS, PEACHES, NECTARINES, PRUNES, GRAPES, APPLES AND OTHER FRUITS INCREASING IN PRODUCTION EACH YEAR.

situated about 35 miles from Leeton is the town of Griffith. Its well laid-out streets and public buildings give an air of prosperity which has been built up and supported by the flourishing orchards which are all located close to the town. Here again irrigation has facilitated the development of fruit-growing, and made possible the production of citrus, vine and deciduous fruits of the highest quality.

Within approximately five miles of Griffith have sprung up other fruit districts such as Wyangan, Ballingall, Beelbangera, Bilbul, Yoogali, and Hanwood, all fruit areas of no mean productivity.

Vegetable growing is another profitable sideline which has been added to the orchard, and Peas, Beans, Potatoes and Tomatoes are grown extensively and find a ready sale in the Sydney markets.

Room Millet is another industry in these districts. Bundles are sent to the broom and brush factories, while the stems are used as fodder for stock and the seed for feeding poultry.

Over crop and heavy manuring programmes are evident throughout the districts, and the excellent yields which have been obtained from even young orchards amply bear out the use of heavy dressings of sheep manure, artificial manures and suitable of ammonia, which are applied each year in most properties.

The programme of one successful orchardist which is typical of others in the district was $\frac{1}{2}$ cwt. of each of calcium sulphate of ammonia, mixed with ten tons per acre of sheep manure, this being in addition to the regular sowing of cover crops and legumes.

An outstanding attraction at Yoogali, situated four miles from Griffith, is the citrus grove of Mr. J. E. Ward. The production and quality of fruit on this grove has been phenomenal, when the first plants reached seven years old the average yield per tree was 11 cases, which is considered a high total for a plantation of any age. Heavy fertilizing by top-dressing and other manures, intense cultivation, ample drainage, expert pruning, systematic fumigation and too much watering have been responsible for the success of this grove, which covers about 90 acres. Other orchards in the district of Yoogali

Dried Fruit Racks.



Yoogali are producing Apricots, Peaches, Nectarines, Prunes, Grapes and Apples, thus proving the versatility of the land in the irrigation areas.

EXTENSIONS OF GRIFFITH AREAS.

With the extension of water and other facilities beyond Leeton and Griffith, further areas of lands have been cultivated—new districts have sprung up including Ballingall, Wyangan, Yoogali, Bilbul and Hanwood: they have progressed steadily until they are now producing each year larger quantities of all classes of fruits. A summary of some of these districts is set out herewith.

Ballingall extends west about six miles from Griffith, and excels in citrus fruits, the rich soil, natural drainage and freedom from flood provides ideal conditions for citrus growing. In recent years this district has also established a name for itself in vegetable growing, Peas are being grown successfully, and in larger quantities each year.

At Beelbangera many of the growers are keen on viticulture, and a number of large vineyards have been established here.

Wyangan: Although citrus is grown largely in this district it has been proved that Wyangan is also suitable for growing Apples, Prunes and Quinces. Apricots and Peaches are also grown and some growers have great faith in the future of Pear growing in this area, particularly Pears for canning purposes. W.B.C. and Packhams Triumph, thrive and bear well, producing fruit with good clean skins.

Bilbul, which adjoins Beelbangera, also produces large quantities of wine Grapes, the Beelbangera winery, which is close to the railway station, takes most of the growers' wine grapes. The wine Grape growers of this and other districts of Griffith are well served by wineries. In addition to the Beelbangera Wine Growers' Co-op. Society, Penfolds are established about a mile east of Griffith, and Messrs. McWilliams, of Hanwood, also have a winery. The districts of Beelbangera and Bilbul do not confine the whole of their activities to wine Grapes, for in addition they grow canning Apricots and Peaches, Quinces, Apples (Granny Smith and Delicious), and other fruits.

Hanwood, known as the southern suburb of Griffith, with its red and chocolate lands, has many established orchards, vegetable and dairy farms. The fruits grown are Grapes (Cornichon, Ohanez), Sultanias, Gordo, Blanco, Zante Currant, and wine varieties. Grapes not otherwise processed or marketed, are purchased by the wineries. Phillips, Golden Queen, Pullars Cling and Elberta Peaches are grown here in addition to Oranges, Grapefruit, and Lemons.

The indications are that these districts, like other parts of the Murrumbidgee Irrigation Areas, will shortly be producing quantities of quality Apples and Pears.

Yenda is situated about twelve miles northeast of Griffith, through

which the main irrigation channel runs after leaving Leeton. Yenda is a centre of wheat, rice and sheep and fruit production. Most of the products of the districts are handled by the Yenda Producers' Co-op. Society Ltd., which also supplies all fruit-growers' requisites, farm machinery, Commonwealth fertilizers, P.B. manures, Bowser stocks of all petrols,

REVIEWS OF INDIVIDUAL PROPERTIES AND CULTURAL METHODS OF ORCHARDISTS IN LEETON, GRIFFITH AND SURROUNDING DISTRICTS WILL BE PUBLISHED IN SUBSEQUENT ISSUES OF THE "FRUIT WORLD."

oils, general merchants, garage and general engineers, case makers, storers, packers under "Own Case" label brands.

The normal annual output of the Society which has 200 shareholders is £60,000. The present directors are Messrs. E. J. Hudson (chairman), L. H. Bridges, G. H. Bromfield, A. L. Gordon, O. J. Longhurst, R. W. Lockman, G. G. Moss; manager (P. H. Rutledge), and secretary (L. J. Rydon).



Interior view of Leeton Co-operative Cannery.

Mr. George Wheeler, of Griffith,

writes: "...the Plant gives me sufficient power to operate six nozzles continuously at a pressure of 300 lbs. in my Vineyard. The outstanding features of the Plant are its simplicity and accessibility of all working parts. I have had considerable experience with spraying outfits, and I find the new M.V. to be the nearest to the ideal spray."



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are "nearest to the ideal spray" because they have every modern improvement in spray plant design: Detachable cylinders with porcelain linings — specially designed adjustable plungers — all working parts totally enclosed and running in a bath of lubricating oil — no glands to leak.

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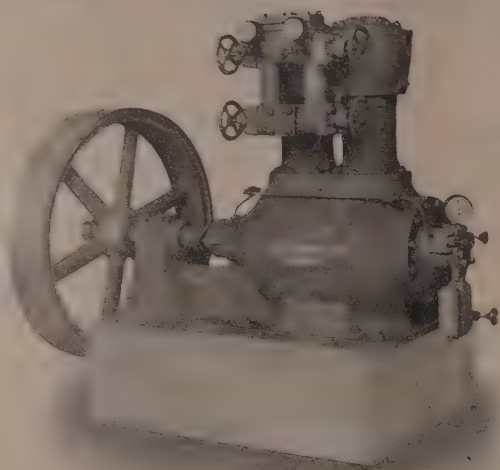
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— Established 1890. —

Around the Packing Houses

The rapid growth of the fruitgrowing industry in the Murrumbidgee Irrigation Areas created the necessity of providing for the preparing, packing, processing and marketing of the many varieties of fresh, dried, canned and citrus fruits produced on the Areas. To cater for this important factor, packing houses have been established which embrace all the latest and most up-to-date equipment

in packing house machinery, together with electrically powered elevators and expeditious grading, packing and handling machinery.

It can now rightly be claimed that packing floors throughout the Area are as modern and up-to-date as it is possible to secure. A short review of some of the floors and fruit handled is set out hereunder.



Interior view of portion of the Packing Shed of the Griffith Co-op. Co. Ltd., Griffith.

Griffith Producers' Co-operative Co. Ltd.

The Griffith Producers' Co-operative Co. Ltd., was formed in 1922, for the purpose of selling fruit and produce for its members.

The company has made steady progress since its formation, and there are now approximately 400 shareholders, with funds in the business totalling over £30,000.

The company packs and sells each year between 350,000 and 400,000 bus. citrus fruit, comprising Washington Navels, Valencias, Lemons, Mandarins and Grapefruit. Granny Smith Apples are also becoming a big factor in the production of Area farms, and quite a lot of high-class fruit of this variety has been exported by the company to England during the past few years with satisfactory results to the growers.

Citrus fruits, Apples and Pears are sold under the company's well-known labels, "Excello" and "Cello."

In addition to fruit packing activities, the Griffith Producers' Co-operative holds contracts with Henry Jones & Co. (Sydney) Pty. Ltd., for the supply of canning Apricots, Peaches, Pears, Grapes, Figs, Quinces and Tomatoes. The value from this source this season was in the region of £50,000. Most of this fruit is produced in the company's cool stores before being sent to Sydney.

Dried fruits are also handled, specialty being made of Prunes. These are graded at the Griffith Shed and forwarded to Sydney, where the company, in association with the Young District Producers' Co-operative Society, own a processing and packing plant, and trade under the name of the Prunegrowers' Co-operative Union Ltd. The Union sold last year 1,200 tons of Prunes. The tonnage for sale this year is greater than several hundred tons.

A big business is done with members in supplying them with packing cases, paper, chaff, spray material, fertilizers, horticultural machinery, etc. The company has an extensive fumigation plant, and last year fumigated 55,000 citrus trees for its members at a minimum cost. For gangs with 30 tents each were employed throughout the fumigation period.

The Griffith Producers' Co-op. also conducts practically the whole of the bulk loading of the settlers' fruit for the Sydney market, and last year handled 858,501 packages, totalling 19,287 tons, on which it paid over £25,000 freight to the N.S.W. Railways.

The present directors are Messrs V. C. Williams (chairman), W. Elder, P. C. Cox, J. C. Thorne, A. Lenahan, and T. B. Oakes. Mr. Mallinson is general manager, Mr. Morley, manager of the packing shed, Mr. R. Macfarlane, manager of the trading store, and Mr. J. Reidy, accountant.

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PLAYS A PART . . .

Every time water runs through irrigation channels it dissolves some valuable plant-food. Some of this reaches the roots; some is lost. Trees cannot flourish in a "washed-out" soil. Replace these losses by the frequent and liberal use of a

WELL-BALANCED COMPLETE FERTILISER.

Full bearing orchards or vineyards need annually at least 2 cwt. of Potash per acre or the equivalent amount in a mixture—10 cwt. per acre of 2:2:1, for example.

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D.F.2/36



The Selbest Packing House, owned and managed by Mr. F. Newton, was established seven years ago, is in the care of Griffith. The packing department has an area of 8,000 square feet with a case making plant at rear and the offices are situated upstairs. A complete record of every fruit is kept, and a distinctive "best" label is placed on each case giving number, grade, variety and color.

The amount of fruit handled annually is approximately 118,000 cases depending to the season. This includes 70,000 cases of Oranges, 40,000 cases of Lemons and Mandarins;

Leeton

Leeton are to be found many ideal packing houses which grade, pack and handle fruit for growers in the district.

The Leeton Fruit Distributors and Packing Company, of which Mr. Attwood is the proprietor, is in Acacia Street, facing the railway. This packing house is equipped with up-to-date packing machinery and is a center of industry, handling, packing and consigning large quantities of fruit and dried fruits for growers and exporters. Fruit from this house is packed under the "Perfect-Pak" label.

The firm of Messrs. Greenwood and Co., at Leeton, was established in January, 1934. Their activities throughout the year are set out as follows:—Navel Oranges are marketed from June to September (main crop); Valencia Oranges from August to February; deciduous fruits, Apples and Peaches fresh, December to March; export Apples (Granny Smiths), March, April, May; Ohanez Oranges, March and April; export Oranges, May, June and July.

Fruit for the local markets is packed under the "Red Ace" brand. In their branch they are local representatives for Messrs. Paterson & Co., Ltd., and the whole of their export fruit is marketed under the name of Paterson & Co.'s various

20,000 cases of Apples—mostly Granny Smith; 10,000 cases of Peaches; 8,000 cases of Grapes the varieties being Ohanez, Cornichon and Waltham Cross; 5,000 cases of Pears—varieties—W.B.C. and Packhams; 5,000 cases Apricots. Further extensions are being planned at this packing house.

Messrs. Joslyn and Snaith, who control the Murrumbidgee Packing House, handle various classes of fruit and their packing house is well equipped with all the latest in modern grading and packing machinery. For export fruit they use the "Navex" label.

labels. For export Apples they use the "Crocodile" label, and for local markets the fruit is packed under labels which show the various fruits contained in the case.

The Craig Mostyn Fruit Packing Company at Leeton, is under the management of Mr. Pilbeam. This company buys, packs, distributes and exports to various countries, specializing in trade with the East. For this trade the distinguishing "Cock" brand label is used. For consignments to the British market the "Supreme" brand label is used. The up-to-date grading and cleaning machinery in this packing house is capable of handling 1,000 cases daily. For green fruits a green label is used and colored wrappers for red varieties.

The Producers' Co-operative Distributing Society of Leeton, is a branch of this Co-op., which is established in Sydney and Melbourne. The manager is Mr. J. Alpin, and this Society caters for growers and exporters and large consignments pass through their huge packing house. The grading and processing equipment covers all the modern appliances for efficient and speedy handling of fruit. The "Dollar Bird" label is used for Lemons and Pears; "Satin Bird" for Apples, and "Golden Grove" and "Comet" labels for Oranges.



Modern methods of cultivation are followed in the M.I. Areas. The above picture shows cultivating operations in a Citrus grove.

Processing Oranges at Griffith

The introduction of the modern packing house has revolutionised the packing and preparing of fruits for marketing. Citrus processing plants now established in all the leading citrus districts handle, prepare and pack Oranges and Lemons under expert scientific methods. The following article traces the treatment given to every case of Oranges which passes through the packing house of the Griffith Producers' Co-operative Society.

The waggon load of fruit stops on the weighbridge, the driver secures his ticket, and crosses the yard to the receiving depot, placing the cases of Oranges on a belt, which conveys them to the basement.

The operator here places them on to another conveyor belt, which automatically carries the fruit on to the open steel tipping elevators, which convey the Oranges above to the washing and drying machines, where the fruit is evenly fed to the first warm bath, passing along under steam sprays, playing on the fruit, then under a four winged revolving immerger which also controls the feed; the fruit then passes through a number of canals in which are revolving brushes, out into a similar bath, in which there is sufficient borax to give the fruit a bright appearance.

The Oranges are then carried overhead on rollers, of the same width as the baths, through a passage equipped

with electric fans to complete the drying, and on to the main sorter belts, where a number of expert females remove any Orange with the slightest blemish, the fruit then passes on to the mammoth grader, where it is graded and sized. It takes about 1 hour for fruit to complete this journey.

The packer then takes over, and the fruit is wrapped, packed and cases lidded and labelled ready for despatch to Australian or export markets.

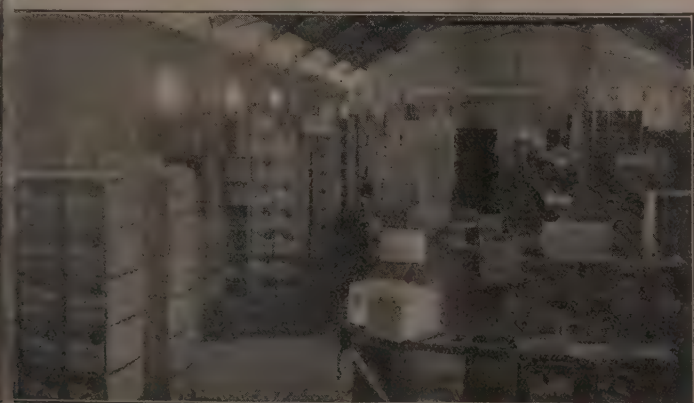
The full capacity of this plant is 2,000 cases per eight-hour day. It is interesting to note that the fruit is not touched by hand after delivery to the receiving depot, until it reaches the packers' bench.

A BILLION POUNDS.

U.S.A. Dried Fruit Production.

The figures covering the production of dried fruits in U.S.A. during 1935 give an indication of the size of the industry in that country. A total of 1,120,560,255 lbs. of dried fruits were produced, creating a record, or, if converted into short tons, the incredible quantity of 560,280 tons.

Prunes, 236,800 tons, and Raisins, 207,064 tons, were the chief high scorers with Apples, Peaches, Apricots, and Figs, in that order. The cash value of the dried fruit production in 1935 was £11,500,000.



Portion of Packing Shed of the Craig Mostyn Fruit Packing Co., Leeton.

Messrs. W. Brown & Sons, of 15 High-street, Lidcombe, N.S.W., have for several years been manufacturing fruit grading machines, starting with a few small machines as a sideline. Such success has followed, that business has been converted into a grader factory, making these machines in all sizes, and other fruiting appliances, such as washing machines, etc.

Feature of the Brown graders is the ease with which the regulation of sizes is achieved by the turning of a handle only. On the large independent control machine the rollers are instantly operated, and setting shows on an indicator in front of the operator. Any number of machines may be bunched to take a pre-determined size of fruit.

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Centrally Situated — Handy to Railway Station.

REPAIRING WATER CHANNELS IN THE GRIFFITH DISTRICT.

Repairing water channels is an operation of vital importance to the whole of Australia, as it prevents seepage, which spoils the land and makes production impossible, and incidentally depletes revenue.

The channels are controlled and kept in order by the Water and Irrigation Commission. A large gang of men is employed and much material used.

The "modus operandi" is: boil all material together, constantly stirring, to obtain complete amalgamation, a number of specially constructed large cauldrons being used, whilst boiling hot it is trowelled on to the old cement water channels, giving a good $\frac{1}{2}$ inch of new surface, and then

dusted over with cement all dirt and moisture having been removed.

The materials used are: Trinidad bitumen, 95 lbs.; 40-50 compo, 182 lbs.; red Mallee sand, 170 lbs.; fine white river sand, 709 lbs.

The above are the component parts which make up the new surface covering. Should any cracks occur in this rubber-like covering, a blow lamp is focussed on the openings and the cracks are closed up.

At the stops and crossings an extra grip is given the covering by making 2 inch indents in the under concrete.

Another system which experts claim is effective, and less costly, is processed as follows:—Boiling Trinidad and Compo 40-50 poured thinly on the concrete, then a layer of hessian and again thin boiling bitumen and lastly sanded over—this system could be termed reinforced bitumen.

Orchardists, Vignerons, Citrus Growers, Dried Fruit Processors, Dairy & Poultry Men

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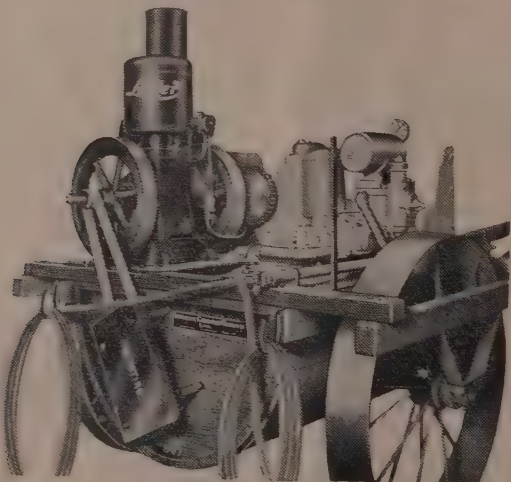
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Operating the Overhead System of Irrigation.

In contrast with the general system of irrigation adopted by most orchards in the Murrumbidgee Irrigation Areas, it is interesting to note the workings of the overhead system of irrigation installed by Messrs. Beverley & Sons, of Griffith. One of the greatest advantages of this method is that depressions in the soil receive the same water as the rest, thus making for a uniform spread of the water. In addition, no drains, furrows, or head ditches are required. The initial cost of installing equipment for pumping the water and piping, etc., is heavy, but in the long run it has been proved that this system is economically effective.

Methods of Operating.

Messrs. Beverley & Sons' pumping plant delivers 25,000 gallons per hour, or an equivalent to 2 acre ft. per day, thus it will be observed that by continuous pumping the whole grove can be given a 2 in. watering within four days. From the pumping plant the water is carried through 2½ miles of galvanised piping, the mains being 7 in. and the sub-mains 4 in. The

pipes are carried into various sections of the orchard on upright poles for the purpose. These uprights are in line with the trees about 3 feet out from the butts and at angles to the mains. The main sub-mains are spaced at appropriate intervals, the laterals, which are moveable are laid at right angles to the sub-mains, one end being connected to the sub-main, the other stopped with a cap. The laterals are laid on one side of the sub-main, and when this section is complete the watering of a section is taken to the opposite side for the next section. When the watering is complete the cap being removed and placed at the other end, the first capped end is uncapped and attached to the main.

These 1 in. galvanised iron pipes have orifices punched in them in a manner as to give an even distribution of rain-like water. They can be arranged with the orifices upright or at any desired angle, this being governed by the amount of wind.—E.L.

TILLING THE VINEYARD.

Deep Winter Ploughing.

IN a properly established vineyard the four factors of fruitfulness are—Correct pruning, thorough tillage, adequate manuring and the control of disease, says Mr. F. de Castella, Viticulturist of the Victorian Department of Agriculture, in the Department's Journal.

Each of the above are important, but none more so than tillage. Disappointing results are more generally attributable to poor attention to the working of the soil than from any other cause.

The methods of working differ with localities, and with growers, yet all recognise the need for soil working. Repeated scratchings a couple of inches deep, Winter ploughing 8 or 9 inches deep, followed by Spring and Summer working at a shallower depth, both have their advocates, and both are correct in different localities and climates. Superficial culture gives good results in cool climates having ample rainfall, whilst in hot, dry districts the deep tillage is necessary.

"I see that you've given up driving your wife to drive."

"Yes, we had an accident."

"What happened?"

"I told her to release her clutch, and she let go of the steering-wheel."

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ried Fruits News and Notes

PRUNING GRAPE VINES

Various Stages Explained

ITH pruning now occupying the minds of vine growers, some notes by Mr. F. L. Jardine, Inspector, appearing in the "New Zealand Agricultural Journal," are topical and will be of interest to those not already conversant with the work.

The grower intended the vine in its natural state to be a creeper, but the use of the saw and secateurs brought about a radical change in its habits, instead of growing as a creeper, it has been forced for commercial purposes to adopt the habits more of a shrub or bush. Curtailing its growth to this extent has naturally reduced its vitality, and instead of producing a vigorous growth of shoots with little fruit it feels its energy and turns all its energy to the production of fruit.

At this point is of vital importance to the grower, it being an easy matter to reduce huge crops of practically market value at the expense of the vine and at the same time undergoing the constitution of the vine.

Vines distressed by wrongful pruning and overcropping often take time to recover. Experience has shown that some varieties of vines are more fruitful on the first and second buds and others on the third, fourth, and even more; in the use of this knowledge the pruning of Grape vines has been divided into two methods—viz., short pruning, which leaves those vines that bear on the first buds, and long pruning, which leaves to varieties that produce large bunches further along the vine.

The fruit of the Grape vine is produced on the canes of the current year's growth exactly opposite the leaf and, these canes develop from buds on the previous year's growth, which in turn are produced from the fruit-bearing spurs situated at intervals along the main permanent arm of the vine. A vine pruned in this manner is usually referred to as a "Unilateral Cordon," or permanent arm with spurs.

At the first pruning, the most upright canes are retained and all other growths are discarded. The main trunk will form the trunk, but it must be shortened back, usually two or three eyes, to encourage strong growth in the following summer.

At the second pruning, the main cane is shortened back along the wire to 1 foot to 2 feet 6 ins., according to the vigor of the vine. The end selected should be on the under side of the cane to induce the downward growth to lie as flat as possible along the wire instead of growing upwards, as it would if pruned on a bud on the upper part of the cane. All lateral growth should be removed.

The third pruning should include cutting the canes on the upper sur-

face of the main arm, usually 6 to 8 ins. apart, and cut back to two eyes. All other growth should be removed except the end cane, which is cut back to 12 or 18 ins. in length.

Assuming the vines are planted 6 feet apart and that they have made good growth, the fourth pruning should bring each vine up to meet its neighbour.

The spurs established in the previous pruning should each have produced two canes, one from each eye, and in order to retain the spurs as close on to the main arm as possible the top cane is removed and the lower one pruned to two buds as previously, a section of the extreme end growth is left up with the next vine.

During the fifth Winter the vine is treated in the same manner as far as the spurs are concerned, i.e., keeping only the lower cane, which is cut back to two eyes.

The end spur of the vine receives different treatment, a short section of the top cane is laid down to meet up with the first spur of the adjoining vine, while the lower cane is pruned to two eyes forming the return spur which will furnish two canes the following Summer that will be treated in the same manner.

It is a recognised procedure when pruning to cut through the node directly behind the bud, the reason being that in doing so a hard surface is exposed, which is less liable to rot or die back past the end bud as when cut through the internode, i.e., the section of cane between the eyes.

DRIED FRUITS BOARD (S.A.).

A meeting of the Board was held on July 5, 1937, when all the members and the Secretary were present.

Secretary reported he had submitted the eighth report of the Board for the year ended 28/2/37 to the Minister, who had asked that the report be not released until it was laid on the table of the Legislative Council.

Reports of the Chief Investigation Officer on his visits to the northern towns were submitted, as well as of the Grading Inspectors in the non-irrigated areas.

It was agreed to make a contribution of the usual amount as the Board's trophy for the highest aggregate marks in the River Murray Pruning Competitions, the final of which was held at Waikerie on July 1.

A statement showing the position of dealers in relation to the State quotas for 1936 season's fruit, was submitted, and the Secretary was directed to communicate with all dealers who had oversold on their quotas, requesting them to advise the Board of the steps they propose to take to adjust.

Financial and routine business was also transacted.

WINE GRAPES CHARGES.

THE Minister for Commerce (Dr. Page) states that under the Wine Grapes Charges Act of 1929 a charge is levied and must be paid by the owner of any winery or distillery on all Grapes which are delivered to that winery or distillery for use in the manufacture of wine, or spirit for the purpose of fortifying wine, during each year from July 1 to June 30.

The Regulations under the Wine Grapes Charges Acts provide that the owner of any winery or distillery shall, not later than July 30 each year, furnish to the Secretary, Department of Commerce, Canberra, a statutory declaration setting out the quantity of fresh Grapes and dried Grapes delivered to that winery or distillery during the year ended June 30 for use in the manufacture of wine or spirit for fortifying wine. The names and addresses of the growers delivering the Grapes must also be shown.

Grapes grown by the owner of any winery or distillery and used in the production of wine or spirit for fortifying wine must be included in the return. No charge is levied on wineries or distilleries using less than ten (10) tons of Grapes.

The Wine Grapes Charges Regulations provide for a penalty of fifty pounds (£50) for failure on the part of the owner of any winery or distillery to furnish the statutory declaration referred to.

Forms of Return have been forwarded to wineries and distilleries to enable the return to be furnished promptly. The onus of furnishing the return lies with the owner of the winery or distillery, and, should no form of return have been received, immediate application should be made to the Department of Commerce, Canberra.

FOREIGN DRIED FRUITS.

Latest Reports to Hand.

Shortage Possible.

It was estimated in May that the total supplies of Raisins on hand in California were 50,000 tons lower than at that date last year. It was predicted that, even a heavy crop this year will be insufficient to meet normal trade requirements. Thompsons were expected to be normal, but Muscatels would be 15 per cent. down. Only about 2,000 tons of Thompsons were unsold at report.



Drying Prunes in the Murrumbidgee Irrigation Areas.

Reports from Greece stated that the crop for 1936 was 130,000 tons, and a carry-over of poor grade Currants was then about 48,000 tons, of which 30,000 tons was expected to be sold to Germany and 6,000 tons to Yugoslavia for industrial purposes. Greek exports in the past three years have been:—1934, 61,358 tons; 1935, 67,399 tons, and 1936, 66,511 tons.

London stocks on March 31 were said to be:—Raisins, 5,704 tons, as against 7,078 (1935), and 8,971 (1934); Currants, 4,650 tons, as against 5,105 (1935), and 3,827 (1934), all of which tends to a prediction of shortage in 1937.

41,781 TONS SHIPPED.

Sales in Great Britain.

Continued demand for Australian dried fruits is manifested in the report to the Commonwealth Dried Fruits Control Board of sales for the week ending July 22, when in Great Britain 2,082 tons were cleared. The details are as follows:—1,140 tons of Sultanas were sold at an average of £44/19/4; 661 tons of Currants at an average of £30/19/9, and 281 tons of Lexias at an average of £42/14/- per ton. The total shipments to Great Britain are 27,330 tons, of which there have been sold 15,216 tons. The demand continues strong. Other shipments to date include:—To Canada, 12,308 tons; to New Zealand 3,605 tons, and to other markets, 421 tons, a total of 41,781 tons.

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of Apples and Pears

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"Vallo" Colloidal Sulphur will remain indefinitely in uniform consistency, is always ready for use, and is easy to mix.

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Home Consumption Quotas

Revised List.

A MEETING of the Consultative Committee of the State Dried Fruits Boards was held in Melbourne on 23rd instant, Mr. G. A. W. Pope, Chairman of the South Australian Dried Fruits Board, presiding.

Other representatives present were:—Messrs Parker J. Moloney, Chairman, Victorian Dried Fruits Board; G. J. Evatt, Chairman, N.S. Wales Dried Fruits Board; G. A. Try, Secretary, N.S. Wales Dried Fruits Board; W. N. Twiss, Secretary, South Australian Dried Fruits Board; W. Cremor, Secretary, Victorian Dried Fruits Board.

The principal business was the revision of the home consumption quotas for dried fruit. After consideration of the revised estimate of probable production and consumption for the 1937 season, the Committee agreed to recommend to the State Boards that the following home consumption quotas should be declared:—

Varieties.	Increase	%	%
Dried Currants	19	—	—
Dried Sultanas	17	1	—
Dried Lexias	47½	7½	—
Dried Peaches	66½	—	—
Dried Nectarines	80	—	—
Dried Pears	37½	7½	—

The Committee hopes that, unless very exceptional circumstances arise, these quotas will not be altered during the rest of the year. No home consumption quota was recommended for Apricots.

In regard to Prunes, it was agreed to allow the existing quota of 60 per cent. to remain until the season was further advanced, and more information regarding the Prune pack was known.

Fewer Prunes in 1936

World Crop Declines.

Approximately 236,000 tons Prunes were produced throughout world last year, a drop of 95,000 tons from 1935, but only 4,000 tons below the 5-year average.

European production was 59,000 tons, an increase of 26,000 tons in 1935. In 1936 U.S.A. produced 177,000 tons as against 298,000 in 1935 and a 5-year average of 213,000 tons. The increased European production was influenced by a large crop in Yugoslavia, which exported 42,000 tons last year, against only 11,000 tons in 1935, a 19,000 average in the last 5 years. The countries absorbing Yugoslav Prunes are largely Germany, Austria, Czechoslovakia and Poland. Many collect a low duty on Prunes and has given Yugoslavia a quota of 23,700 tons per annum.

Bulgaria's Prune crops have grown in recent years, the outlet for surplus being predominately many. Owing to a small crop in Rumania, the only other European Prune producing country, will be practically no export surplus. In France's Prune requirements, 18,000 tons come from U.S.A.

GRAPES BEAR IN 18 MONTHS

When T-Budded.

A new method by which seedling Grapes can be made to bear in 18 months, instead of in 4 or 5 years, reported by the U.S.A. Department of Agriculture. Experiments conducted by the Bureau of Plant Industry give T-budding as a means of hastening fruit bearing of selected varieties.

The seeds were planted in a greenhouse in February, and when the plants came up and showed a few leaves, was transferred to a gallon can 6 inch pot. By June it had grown 12 inches high and had 4 buds. The buds were T-budded into vigorous root stocks or bearing vines in the vineyard. They were wrapped in rubber grafting tape and the top pinched off at the tip to check terminal growth.

Ten days later the shoots were cut back to the bud. As 3 or 4 buds are inserted in each shoot the weaker ones are pinched back and only the strongest allowed to grow. August of the following year (at 18 months) they will bear, says report. Out of 1,500 T-buds worked, 80 per cent. were a success.

INCREASING CONSUMPTION

Publicity Campaign.

At a meeting of the dried fruit joint publicity committee, which was presided over by Mr. P. Malpas, Chairman of the Victorian Dried Fruits Board, it was reported that an Australian-wide window display campaign had been undertaken, with considerable success. Excellent displays of dried fruits had aroused interest both of retailers and of the public, and had stimulated the sale of fruit. The committee decided to conduct an exhibit at the forthcoming Royal Agricultural Show in Melbourne and Adelaide. Attracting folders, setting out the culinary uses of the various tree fruits, it was stated, had been printed. In Victoria the committee reported a special display had been made with raisin bread for that purpose 10,000 leaflets had been distributed to the trade.

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— Manufactured by —

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GUARANTEED 99% PURITY

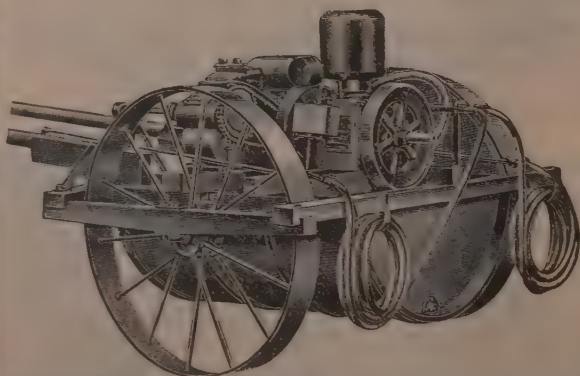
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LISTER ENGINE—The world's most reliable power. Totally enclosed. Dirt cannot harm it. Vertical cylinder.

MYERS' TYPE PUMP—Cylinders porcelain lined. Valves and seats rustless steel. Gears nickel steel, machine cut, hardened. Pressure constant.

PRESSURE UNLOADER—Automatically relieves pressure on engine and hoses when spray is closed.

STRAINER—Easily cleaned, as placed on top of vat—not inside it.

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Tasmanian News and Notes

WEATHER REPORT — PLOUGHING AND PRUNING
ADVANCED — CONTROL OF PESTS — COOL STORES
FILLED — REWORKING CHANGES — FRUIT PACKING
INSTRUCTION — REPORT ON BERRY FRUITS.

SUMMARY OF INFORMATION
Given by the Chief Horticulturist
of the District Orchard Inspectors,
in connection with other matters relevant
to the culture of fruit, follows:—

Weather.

Throughout all the main fruit-
ing areas severe frosts followed
to very bright days prevailed
the greater part of the

Rainfall was well below
average, and the records compiled by
the Meteorological Bureau at repre-
sentative centres follow:—

At Launceston, 131 points compared with
average of 221; Franklin, 110
compared with the average of
140; Devonport, 79 points compared
with average of 322; and Devon-
port only 83 points, as compared
with 338.

Temperatures for the month were
much lower than average.

Seasonal Work.

Growers generally have taken ad-
vantage of the dry weather follow-
ing last month's heavy rains,
and ploughing is much further ahead
than normally the case at this
time, though many southern
orchards were held up in their har-
rowing. Pruning has commenced in
the north and is practically complet-
ed in the northern districts where the first
sprays for Red Spider have
been applied.

In regard to pruning, growers are
encouraged to bring their
orchards on to laterals, particularly
in the case of colored varieties. The
experience in January resulted in
considerable short growth, and it
is likely that certain varieties will
be a tedious task; however, it
should be remembered that some of
the young wood may be advantage-
ously used to form the fruiting
wood recommended, and an oppor-
tunity of removing old and twisted
limbs in their favor, is present.
Many trees bore heavily during
the last season and are likely to be
checked in consequence for the
next 8 crops. In such cases, where
fruit buds are in evidence, a
moderate thinning will greatly bene-
fit the blossom set in October.

Pest Control.

The advantage is being taken of
the dry weather to plough in deeply
the vines and fruits affected with
mildew, and good preliminary con-
trol should be obtained in this way.
Scraping and the removal of
Moth bandages is also under
consideration and if this is backed up by the
treatment of all prunings and dis-
carded wood, most of the main or-
chards, including Red Spider,
Fly and Mildew will receive
a set back. Woolly Aphis has
caused more trouble during the past
year than for some years; this
may be attributed to a reduction in
the number of parasites present, or a
factor which was not entirely suited
to its rapid development.

Pruning operations on Peaches and
Nectarines should be hurried forward.
A marked increase in tempera-
ture following the severe weather ex-
perienced, is likely to encourage bud
break. Peaches which suffered
from Aphis will require an applica-
tion of tar distillate now. For Red
Spider control, however, prepared
oil emulsions have not yet
been superceded.

Apple Storing and Processing.

Practically all cool storage space
for apples and Pears is filled to
capacity, and many hundreds of cases
are held up until space becomes
available through the shipment of
fruit. Most of the growers' sheds

are also full, and during last month
thousands of cases of Sturmers were
picked and sent direct to processing
plants. This last outlet has un-
doubtedly relieved the position con-
siderably, and a very fine product is
being turned out. It is reported that
some late spot is developing on shed
stored fruit and growers are advised
to overhaul samples from time to
time, to ensure that deterioration is
not taking place.

Reworking.

Judging from the requests for ad-
vice in regard to preliminary pre-
parations for reworking and suitable
scion varieties, many Apples and a
much larger number of Pears than
last season, will be changed over.
Crofton and Delicious, together with
red bud sports of these and other
popular varieties are much in favor,
Granny Smith is also in demand, and
Comice amongst the Pears. Those
growers desirous of obtaining scions
are requested to get in touch with the
Orchard Inspector for their particu-
lar district, or write in direct to the
Department of Agriculture, Hobart.

Packing Classes.

Children from all the main State
Schools in fruit-growing districts are
now attending regular packing
classes. Instructors report that fol-
lowing the first two or three classes,
pupils have made rapid strides, and
the interest aroused by the Calvert
Shield competitions has in some
centres been still further stimulated
by local support and promised
awards.

Stone and Berry Fruits.

Apricots and Peaches have a very
fair show of buds in most districts,
and pruning will be completed very
shortly. Before the end of the
month the first spray for Peach
Curl (Bordeaux mixture, 4:4:40) and
Shot Hole should be applied, for
though most trees finished up in good
condition, severe loss was caused
through these diseases earlier in the
year.

All old canes must be removed in
Raspberry and Loganberry planta-
tions and the young canes thinned
out to the most vigorous. With
Raspberries, unripened wood should
be removed from the tips, and the
Lloyd George variety (which has a
tendency to produce flowers and fruit
on the upper portions of the young
canes in Autumn) cut back below the
last bud, which grew out into flowers.
Support against the winds in Spring
may be given by tying the canes
together near the tips into threes
and fours.

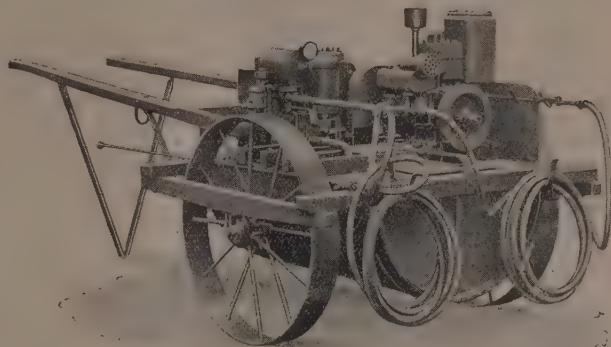
Gooseberries will require im-
mediate attention in the matter of prun-
ing. Close pruning of all laterals is
the general method used in subur-
ban areas, but commercially a judi-
cious thinning out of the centre and
removal or shortening of low and
trailing branches to an upper bud, is
sufficient once the bush has been
shaped.

Black Currants produce nearly all
their fruit on the young shoots, and
pruning should be carried out with a
view to maintaining a constant
supply of this. Each year a number
of the older limbs are removed and any
which are obviously affected with
borer. The latter may be recognised
by the shortness of the young shoots
coming from them and the large
number of these present where the
borer has been at work. Cut back
until a solid white core is obtained,
and collect and burn all prunings.

The 1937-38 spraying chart will be
available to growers within the next
few days.

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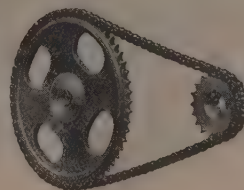
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RONALDSON - TIPPETT

FRUIT TREE PLANTING

Advice as to Varieties

(By T. W. Brunning, Somerville.)

THE necessity for the elimination of fruit varieties in cultivation is apparent to all, but a difficulty arises from the fact that the fruit-tree nurseryman must carry varieties which are not only suitable for Australian conditions, but also for New Zealand and foreign countries in the Southern Hemisphere, where tastes are different from our own, and where color in the fruit is, perhaps, more important than quality. So much so that there is too great a number of varieties.

Apple Varieties.

Apples for early markets start with the Beauty of Bath variety, followed by Wilson's Red June in New South Wales, William's Favorite in Victoria, and Carringtons red and striped varieties slightly later in New South Wales, where an old variety which realised high prices last season, namely Cowell, has come into prominence. In the cooking classes, Lord Suffield is followed by Peasgood Nonsuch and Alfriston to pick over a long period. Lord Nelson, with a resemblance to a large Gravenstein in color only, is popular in the northern areas and may be relied on to bring in good prices. Then comes the Gravenstein period—no Apple in the red and striped kinds available has as yet displaced this popular variety, the market still demands the Gravenstein.

Then there is a slack period between the Gravenstein and the Jonathan, and the only Apple to plant for the first export boat in the Willie Sharp, because of its firm and good keeping qualities, but it is at present off the export list. Fruit off young trees cannot be expected to carry as well as fruit off older trees. The fruit is of Cleopatra type and an excellent, reliable bearer with a clear yellow skin over snow white flesh of good quality.

McIntosh Red fills in a period of ripening before the Jonathan in the northern States.

Then come the Jonathan, Cleopatra, Dunn's Favorite, and Delicious for local market, cool storage and export, and they still retain the popularity due to them. These varieties must not be relied upon to keep for long periods where cool storage is not available. That need can be filled from the following:—Rome Beauty, Red Statesman, then the latest ripening kinds such as Granny Smiths, Tasma, Rokewood and Yates, and, if a green cooker is required other than Granny Smith, Stewart's Seedling is a large dark green variety, and in those States where Apples are sold by weight it is advantageous as it is a heavy Apple, which means much to the retailer.

Comment might be made on the omission of Sturmer Pippin, and

rightly so. If thinned, this variety still retains its good cropping of good quality fruit, but prices seem to keep this good Apple out of the picture. During the past two years, however, this variety has been asked for. Cox's Orange Pippin has the disability of being unsuitable in many districts, but where conditions are suitable and the fruit is free from bitter pit, a big future awaits the grower, as high prices are always available. Laxton's Superb is similar to this variety and may supersede it later.

Pear Varieties.

In Pears the varieties are considerably reduced—firstly there is the Clapp's Favorite, with its high color, just ahead of William's Bon Chretien, with Howell as a filling-in variety, followed by Packham's Triumph, which is a first-class variety for local market, cool storage and export; then Beurre Bosc, Winter Cole, Winter Nelis and Josephine de Malines, which go to make up the best varieties in existence. Later varieties which are good keepers, apart from cool storage, are very essential for pollenising. L'Inconnue and Winter Bartlett are both helpful for Winter Nelis.

Doyenne du Commice, the highest priced Pear in the export trade, requires Beurre de Capiamont amongst others for successful pollenisation. Doyenne du Commice is a good Pear, but its bearing stage is not reached much before seven or eight years, so consideration must be given to earlier bearing varieties to maintain the orchard finances.

Planting young fruit trees for the

present season calls for attention. On receipt of the trees, open package and if the trees are shrivelled, put the roots into water for twelve to twenty-four hours according to their condition, place the trees in trenches, stand them upright, and cover the roots with soil. They may then be planted as required for planting. Early planting ensures less losses in the case of early Summer owing to weather setting in before the root system establishes itself. The roots are never wholly dormant; planted in June often having over four inches of new rootlets by August or early September.

Pruning Newly Planted Trees

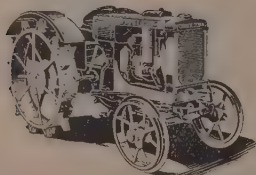
Prune after the trees are planted, not before. The limb growth, if pruned short, becomes a stub and the eye bud gets knocked out, resulting in mis-shapen new growth, causing an unbalanced tree.

Another important pruning feature to be guarded against is not to cut the head off the young tree or cut the head limbs close into the stem. In the case of Peaches and Nectarines, often no bud close in exists. The whole tree shape is ruined by practice. Cut the limb growth at least two or three inches from the stem head, if you must prune, and make sure that at least two buds exist between your cut and the stem to ensure a good growth of at least two limbs. Generally trees must be pruned up to seven or eight feet from the stem head the first year, and then strongly grown trees, and have weaker-limbed.

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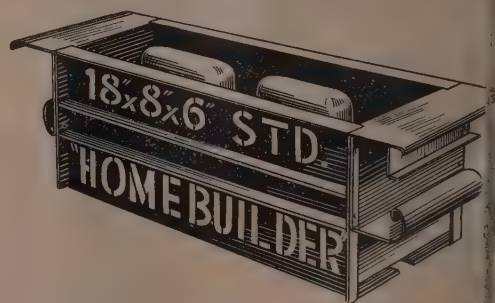
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ITRUS News AND Notes

GE GROWING IN BRAZIL.

Exports Growing Rapidly.

Many people the South American country of Brazil is related to the nut industry. Australia now Brazil for the opposition to Australia in the supply of the European market, but it is so generally known that Oranges are becoming more and more known on the world's

It is one of the big States of America. Its largest city, also, is as large as Melbourne, population of over 1,000,000 and the agriculture, pastoral and industries are developing

of considerable interest to that the export of Oranges Brazil is increasing fast. Pre-little organisation was seen in the mass and in very fashion. Loose heaps were at the railways and barges, but modern packing sheds, with ate and efficient grading, g and packing facilities have introduced and large quantities ages, carried in cool chambers tips, are now sent to

The oranges exported a different type to those stralia, and compete more those from South Africa, of a large size with only a ture skin and with color vary-om green to a light yellow. re really sweet and very juicy, e becoming very popular over-

outhern Brazil water is very al, and modern methods of cul-are being introduced until, destine, Brazil will soon be one large producing centres for the supply of Oranges, especially ating is being rapidly increas-owing is made comparatively y reason of an ideal climate anges and a low rate of wages, relatively low cost of produc-

US AT THE MELBOURNE "ROYAL."

Entries Close August 21.

ers are asked to increase the of entries in tray classes at 37 Melbourne Royal Show. It that an opportunity was lost ar for educating the public on ous types of citrus fruits ex- because the entries were and it is suggested that a more co-operation be extended vers this year. ies for all classes close on . 21. In the Export Packing ition, exhibits must arrive in ne by August 14 to allow r the period of five weeks cool before judging is done, but ther classes delivery and stag- be made up to the morning show.

eulogistic comment was ex- at the citrus display last and it is hoped, and anticipated, 1937 will be even better.

FORBIDDEN FRUIT.

Grapefruit Now Popular.

Those persons who now recognise Grapefruit as an accepted member of the citrus family, will be surprised to learn that, even in U.S.A., where it has become a universal breakfast dish, when the great World's Fair was staged in Washington Park, Chicago, in 1893, Grapefruit was something of a novelty.

In a pamphlet published in England in 1905 it was described as "The Forbidden Fruit," or Shaddock, or Grapefruit, and people were told how to eat it. Once the technique of eating it was mastered, Grapefruit became popular.

Its popularity, however, created a problem in America, where production exceeded consumption and other means of utilising the fruit had to be found.

Since Grapefruit-canning is concentrated chiefly in Florida, about half the peel grown is available for processing into an amber-colored oil with the smell of Orange or Lemon oil, and equalling them as a flavoring agent. The main outlet for this oil is Great Britain.

Grapefruit champagne is another new adaptation. Sugar must be added to achieve this, because the fruit does not have enough natural sugar to ferment properly. For comparison Grapefruit has a sugar content of from 5 per cent. to 8 per cent.; Orange contains up to 12.6 per cent. sugar, and Grapes, which are the usual source of wine, run from 12 per cent. to 25 per cent. sugar.

Juice from which Grapefruit wine is made is obtained from sound fruit which is unmarketable. The fruit is cut in halves and reamed with a burr.

The bitter naringin is extracted with care. By holding the wine for a period at a temperature of 125 deg. F. (about 52 deg. C.) a sherry-like flavor is imparted.

U.S.A. ORANGE EXPORTS.

Figures Drop in 1936.

The 1936 crop of Oranges in U.S.A. was approximately 52,500,000 boxes, or 12,500,000 boxes less than 1935, and about 1,000,000 boxes less than the average for the past five years. Practically the whole of the production comes from California and Florida, with next volume from Texas. In 1936 California's crop was light, with 33,000,000 boxes, but Florida, at 18,000,000 boxes, had above the normal production.

About 8 per cent. of U.S.A. production was exported last year, 4,210,000 boxes, as against 5,425,000 in 1935. Shipments to Europe declined, but export to Canada rose to 2,426,000 boxes, and was the largest export trade made.

In 1936, Great Britain took 759,000 boxes of U.S.A. Oranges and the Continent 722,000 boxes, of which France took the largest individual share, with 400,000 boxes, followed by Sweden, Norway, Netherlands, Belgium and Germany in that order.

CITRUS IN FILMS.

Mildura Provides Setting.

As part of a film being prepared by the Commonwealth Cinema Department, to be called "Song of Australia," and to depict all phases of Australian life, an operator recently visited Mildura and secured some very versatile "shots" of the citrus industry. The film will be a talkie, and much information will be given

VICTORIA'S CITRUS PRODUCTION. 1936-37 Figures Down.

According to figures released by the Government Statist on July 9, Victoria produced 563,703 bushels of all varieties of Oranges, 16,823 bushels Grapefruit and 181,920 bushels of Lemons. In the previous season the respective figures were:—604,537, 13,753 and 205,089. A glance at the attached table shows the variations in each variety and the production by districts. The figures represent bushels. The total number of individual growers is recorded as 2,140, a decrease.

Districts.	Growers.	Navel. Bush.	Valencia. Bush.	Mediterranean Sweets. Bush.	Other Common. Bush.	Mandarins. Bush.	Seville. Bush.	Grape fruit. Bush.	Lemons, Limes, Etc. Bush.
Central	549	73	27	—	72	—	2	36	86,138
Wimmera	43	325	102	—	72	—	—	—	687
Mallee	844	192,504	91,300	5,311	14,946	11,527	2,609	10,712	30,211
Northern	595	139,780	70,961	6,203	8,845	4,240	10,790	6,067	62,752
North Eastern	75	1,956	359	452	1,070	25	10	8	1,310
All Other	34	70	19	1	52	—	—	—	822
Total, 1936-37	2,140	334,708	162,768	11,967	25,057	15,792	13,411	16,823	181,920
Total, 1935-36	2,425	373,217	156,813	14,629	29,697	15,576	14,605	13,753	205,089

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Tomato Varieties

TESTS OF SUITABILITY

Department's Recommendation

WITH a view to assisting Tomato growers to find the varieties most suitable to their districts, as well as those least liable to disease, the Victorian Department of Agriculture began some investigations in 1935 and continued them last year. The following is a review of the results reported by Mr. Basil Krone, Chief Packing Instructor, in the Department's "Journal of Agriculture," to whom we are also indebted

for every satisfaction. An excellent variety which is sure to be popular in this State.

Of the above varieties, Red Marhio and Kondine Red are being retained. They are first-class late varieties. Information with regard to the behaviour of these varieties in our northern districts, where it is possible they may behave differently, is not available at this stage.

A very good cropper, but, although of a round shape, it is not of the best quality. Growers in the Keilor, Portland, and Wangaratta districts continue to plant it, but elsewhere it is being discarded.

Ailsa Craig.—A very good cropper, but the fruit is too small.

Abundance.—A heavy cropper of exceedingly low quality fruit of no flavor and no substance.

Selected Recruit.—This variety is very similar to Market King in appearance and characteristics, in fact, it is difficult to distinguish between the two.

Eccles Surprise.—A good round-shaped Tomato which is a satisfactory cropper of excellent quality. Best results are obtained when it is lightly pruned, but it should be stak-



Glasshouse Tomato growing without heat.

ed for the loan of the blocks illustrating this article.

Seed of 13 varieties was secured from N.S.W. and Victoria, and observation made on the growth and cropping ability. Some varieties, satisfactory in N.S.W., were found to be unsuitable in Victoria, but others were found quite satisfactory, and will be an acquisition to this State, even supplanting some of the older varieties. In reporting, Mr. Krone says:—

Australian Earliana.—This medium to light cropper was tested in all districts, but proved to be quite useless under Victorian conditions. It is subject to splitting and softens badly at the ripening period.

Bonny Best.—This variety cannot be recommended. It is a medium cropper and good carrier when planted late in southern districts, but is inclined to run small. In northern districts it is useless as an early variety. It softens badly at ripening period, and is a poor carrier.

Beefsteak. — A good quality Tomato, but a poor cropper. It is misshapen, is very subject to cat-faces ("Cat-face" is a term used to describe a rough, irregular surface, more or less corrugated and uneven); is subject to blossom end rot, and splits badly everywhere it is grown.

Kondine Red. — This excellent variety has proved to be a good cropper of first-class quality, and is satisfactory as a late variety in all our southern districts. It will be grown over a wide area when better known.

Keystone.—A useless type, similar to Beefsteak in undesirable features.

Red Marhio.—A Tomato of quality and good to medium cropping habit. It is as round as a ball and gives

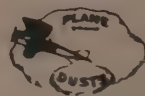
A pleasing feature of Kondine Red and Red Marhio in the tests was their value from a commercial point of view. They were profitable to grow in the bush form; also whether lightly, medium or heavily pruned, on stakes. From observations, however, it is suggested that they be grown as staked varieties and pruned to a single leader, but to not more than three leaders.

The following varieties were tested from seed obtained locally:—

Market King.—This variety is a cluster type which must be heavily pruned and forced. It is inclined to run small and is subject to splitting.

ed. It can be confidently recommended for all southern districts. Eccles Surprise may become the main variety in the Bacchus Marsh and Croydon districts. It is a first-class late variety, but unfortunately in some of the northern areas is inclined to softening at the ripening period.

Frogmore.—A variety which has been tested in the Portland district with every satisfaction. Medium pruning appears to suit it and it should be grown on stakes. It is a nice round Tomato of good flavor, which suits the Melbourne market, but it is not a good carrier for inter-



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state markets. This variety may be grown on well-drained situations otherwise it is subject to splitting.

San Mazano.—This new variety is a good cropper in all parts of the State. Unlike other types, it is not harvested until it is a deep red color. While not satisfactory for table use, this bright red Tomato appears to be the most suitable available for sauce. It is dry, not what mealy, contains very few seeds, has a tough skin, and will not under forcing conditions. The San Mazano Tomato has very good export qualities, and will carry well from Melbourne to Sydney and Brisbane after being harvested. It is full red color. It may be heavily forced on a single leader, or by the tripod method of staking suitable variety admirably.

It is recommended that, when possible, round, smooth-shaped varieties should always be grown. Flat varieties are frequently heavy croppers of poor quality. Round varieties are often poor to medium croppers of good quality fruit, but for this disability is gradually overcome, while those of flat shape usually bring low prices.

To assist growers who wish to know an area of a given size, the following counts of Tomato seed per pound should be of assistance when buying supplies:—

Burwood Wonder
Crimson Bell
Eccles Surprise
Market King
Recruit

In Victoria, first-class round varieties are available, but a dearth of good round early varieties. More of the latter type would improve the industry considerably.



"Market King" variety of Tomatoes referred to in this article.

Old Day in South Australia

Pruning Demonstration

MORE than seventy people attended a field day, which was arranged by Paracombe Fruit-growers' Association. Mr. Leishman, expert, and Mr. Fowler, member of Blackwood Experimental Station, gave a demonstration of pruning. A six-acre block of Jonathon Mr. A. E. Brealey's Orchard was selected. These trees had made good growth, and had reached a stage in their development when a pruning of treatment was necessary. The method adopted was to cut back weak leader to check the excess flow of sap, by this means buds were rejuvenated and a better crop of fruit would result. The party then visited Mr. A. Dear property, where a block of Beauty Apple trees were inspected and found to be in excellent condition, fruit spurs were well developed showing promise of full blossom. The method adopted was to cut fruit spurs to keep the trees covered with healthy growth. The next point of interest was Mr. Gregory's orchard, where a different method of pruning was carried out. Mrs. Pears were the interesting feature here, buds were spaced at even intervals throughout the tree. This grower claimed that the method of treatment gave an even regular crop of Pears. The instructors recommended a more liberal pruning of spur wood as a generative practice. Mr. O'Mahoney's orchard offered an opportunity for Mr.

Leishman to exercise his skill, pointing to a block of single-worked Apple trees showing strong growth of tangled branches, the owner remarked "There's your problem gentlemen. You may go to it." This the experts did in a commendable way.

The party clambered through the fence into a young orchard owned by Mr. Stone at this stage, and Mr. Fowler took the shears. After explaining the fundamentals of pruning, he proceeded to demonstrate on a young Apple tree, here a number of growers tried their skill, the result will be watched with interest. The party then inspected the packing shed owned by the Paracombe Fruit-growers' Co-operative Society Limited, where school children were seen engaged in Apple wrapping and general pleasure was expressed at the excellence of their work. Mr. Gregory, of the Gerrard Wire Tying Co., is the instructor, and holds a class of about thirty boys and a number of girls in the packing shed during the Apple packing season, the children are drawn from the senior classes of Houghton and Paracombe Schools. Adjournment was made for tea provided by the ladies.

In the evening a large gathering assembled in the Paracombe Hall to meet Mr. Strickland, Chief Horticultural adviser to discuss important matters affecting fruit-growers. The conference lasted from 8 o'clock till 10.30. A great deal of valuable information was gained.

Modern Spraying Outfit

Australian Fruitgrowers Combine to Design Such

More than thirty years ago once a party of prominent Australian fruit-growers called at the engineering works of Messrs. Ronaldson & Tippet Pty. Ltd., at Melbourne, Victoria. They stated the object of their mission briefly and went to the point. They wanted a spraying plant built—a spraying machine that was to be of the highest standard in quality, materials, design, workmanship, and above all, one which would particularly meet the requirements of Australian growers.

It was a tall order, and one that could not be solved by the waving of a magical wand. So they went into conference with Ronaldson & Tippet designers and engineers, after much discussion and weighing out of ideas and views, departed with the promise that they had come to get.

A few days later they returned. But time in a larger body and a critical frame of mind. The machine was waiting for their inspection. Mercilessly they went over it inch by inch, pointing out an improvement here, alterations and additions there, while the designers and engineers took notes and drew rough sketches. With an air of enthusiastic anticipation they once more went away.

At last they were getting there! When they returned for the first time, their decision was one of approval and applause. They got the machine they had desired.

From that day Ronaldson-Tippet have exhaustively studied the problems and needs of growers over Australia, improving and building up on the original specifications of the plant that Australian designers designed themselves. The plant built in the works to-day represents years of painstaking research and practical experience in spraying plant design and construction. Ronaldson-Tippet engineers are in constant touch with users in every State, alert to world engineering

development, and steeped in the knowledge of Australian conditions and requirements, with the result that the Ronaldson-Tippet range of spraying plants comprises a type and size of plant to suit every individual grower's need. No matter what size his orchard or in what part of the country—on the plains or in the hills—there is a plant to suit him amongst this comprehensive range.

Each and every plant is quality built throughout. The power unit, which is the heart of every sprayer, is a renowned Ronaldson-Tippet Type N, roller-bearing engine, totally enclosed and automatically oiled. It requires practically no attention, is built to last a lifetime, and is amazingly cheap to run. The pump is a Ronaldson-Tippet Type F2, high-pressure, double plunger spray pump, also totally enclosed and automatically oiled. The cylinders are in stainless steel and every working part operates in a bath of oil. Like the engine, it is dust, dirt, grit and spray proof, but every part is instantly and easily accessible. Efficient agitation is assured by a propeller-type, rotary agitator working in large bearings. The shaft is special rustless bronze.

That Australian fruit-growers should approach Ronaldson-Tippet, of Ballarat, in the first place, is indicative of their confidence in Ronaldson-Tippet productions. Executives, designers and engineers all realised this, and felt that Ronaldson-Tippet prestige was at stake. After all those thirty years of research, hard work and expense, they admit that success was with them from the start. Such success that brought its own reward.

After a reunion dinner held in London, the whole party paid a visit to a music hall. One member was greatly smitten by the charms of a quartet of girl singers, but she refused to go out to supper with him.

Protect Your Plants

FROM SNAILS, SLUGS, APHIS, AND ALL GARDEN PESTS WITH

PESTEND SUPERFINE

(Tobacco Dust)

Expert gardeners and growers recommend the use of PESTEND SUPERFINE—either for dusting, spraying, or for dressing the soil.

Used in a spray-duster or pressure-gun, PESTEND SUPERFINE adheres better, lasts longer, and costs less than ordinary spraying powders.

PESTEND SUPERFINE Tobacco Dust is non-poisonous to plants, inexpensive and easy to use. Try it out yourself!

Obtainable in 4 lb., 28 lb., and 1 cwt. bags at all produce stores, or direct from W. D. & H. O. Wills (Aust.) Limited.

5869-3-7



A tradesman and a GOOD CITIZEN

EDWARD WILLIAMSON NICHOLS is a carpenter, as was his father before him. A good tradesman and a good citizen; typical of thousands of young men in this country. He and his kind are the salt of the earth. They do the nation's work, live within their means, pay their debts promptly, and provide for the rainy day.

Mr. Nichols took out his first A.M.P. policy (for £200) when he was 18. That called for an investment equal to less than 1/5 a week. (Any young man in work could do that.) Then, when he was 21, and getting a higher wage, he added a £300 policy. To-day he is 24, and he has arranged for another £200 policy to begin on his wedding day next month.

Mr. Nichols' father died last Christmas time and left him the proceeds of an A.M.P. policy that had grown, with bonuses, to £827. That money is being used at this moment in building a house. The young couple will begin life together in comfort and security, and isn't that the way it should be?

Young man, you can do what Mr. Nichols is doing. Don't say you can't; if you are in work you can, and you will get endless satisfaction out of it. Ask us to send an experienced man to talk the matter over with you.

A.M.P. SOCIETY

The Largest Mutual Life Office in the Empire.

C. A. ELLIOTT, F.I.A., Actuary. A. W. SNEDDON, F.I.A., General Manager.

BRANCH OFFICE: 425 Collins Street (Cnr. Market Street), MELBOURNE, C.I.

VINCENT WHEATLEY, Manager for Victoria.

Head Office: 87 Pitt Street, Sydney.

Other Branch Offices at Brisbane, Adelaide, Perth and Hobart. District Offices throughout all States.

Motor Cars, Trucks, Tractors

Correct Oil in Tractors Overheating Causes

EVERY tractor driver appreciates the need for maintaining the correct level in the sump of the engine, says E. T. Brown in "Farmer and Settler," also that he must have a good grade of the right kind of oil for the engine concerned, and the temperature-season conditions.

But there are still points which are frequently overlooked. Normally it is a simple matter to drain the old oil from the engine sump, the gearbox and the rear axle, and refill with fresh oil. When the farm tractor is new, however, it is necessary to flush out those parts with a special flushing oil, before refilling, after the outfit has been running for 15 to 20 hours, and again after running for another 30 to 40 hours. This is essential, because the oil, during the running-in period, collects metal particles; these must be removed, otherwise extremely rapid wear of the bearings and cylinder walls results.

It is also advisable to flush out these parts every third or fourth time they are drained and refilled. If the tractor driver feels he is not capable of doing this work and a service station or garage is near at hand, the job should be entrusted to a skilled hand. This flushing is not a fad, but a matter of very great importance making for future service.

But there is another frequent trouble experienced by the careless,

or shall we say, unthinking tractor driver, and that is

Overheating.

There are numerous causes of overheating. Persistent trouble in this way is often due to an accumulation of fur and hard deposits in the radiator core, water jackets and hose connections. It may be caused by a too-rich or too-weak firing mixture. It may also be caused by a defect in the ignition which does not permit of advancing the spark sufficiently. In many instances, however, it is due to a slack fan belt, and the trouble is greatly increased if the belt also drives the water impeller or pump, because under such conditions both the flow of air and of water are affected.

The tension of the fan belt should be tested. To do this the belt should be pushed with a finger at a point midway between the fan pulley and the engine pulley. When correctly adjusted the "give" should be about 1 in. If looser than this the belt is almost certain to slip and overheating results. If adjusted too tightly the fan belt will function all right, but wear and tear of both the belt and the fan spindle will be accelerated. Fan bearings should be kept well lubricated, and a good heat-resisting grease should be used for the pump. Special greases are manufactured for the purpose, and one should be bought.

12,250,000 CHEVROLETS.

Since November, 1911, when Chevrolet came into being, the company has manufactured a total of 12,250,275 passenger cars and trucks. Its 25-year record was culminated in 1936 with an all-time record year for domestic sales.

The remarkable growth of the company can readily be seen from records of its annual production, and especially from the fact that while it required eleven years for Chevrolet to build its first million cars, it took only fourteen years to build the subsequent eleven million. The twelve millionth Chevrolet rolled off the assembly line on August 5, 1936.

In 1936, for the seventh time in the last 10 years, Chevrolet has led the entire automobile industry in production and sales, says Mr. F. H. Mee, advertising manager for Preston Motors Pty. Ltd. Dealers' profits have been higher than during any other year in the company's 25-year history, with 99.6 per cent. of all dealers showing profits.

Approximately 6,000 Chevrolets are being produced each working day. This large volume was made possible by an expansion programme completed a year ago at a cost of \$5,000,000. In preparation for the manufacture of the 1937 models, an additional \$5,000,000 was spent on new machinery, tools, and plant rearrangement prior to the start of operations on the current line, setting what is believed to be a record for a single year's expenditure of this kind.

Sales eclipse those of a year ago, which at that time marked a new record. In the month of November, Chevrolet dealers delivered 108,093 units, a gain of 16,028 over the total for the same period of 1935, and their bank of unfilled orders was larger by many thousands of units than in 1935.

PLAY IN STEERING WHEEL.

It is advisable to give your steering periodical inspection to prevent costly repairs, and to assure the safety of yourself and the passengers.

Excessive play in the steering should be checked at these points. Examine steering drag link and tie rods for slackness. These should be adjusted regularly, or, if wear is excessive, replacement of ball joints should be effected.

Slackness in the steering box should be checked as follows:—

End play in steering worm.

This can be rectified by adjusting large nut on top of box or removing shims from bottom plate.

To take out end play from the sector shaft, remove shim from side plate or adjust thrust screw if provided.

Play between the steering sector and worm can be regulated by adjustment of the steering flange or the eccentric bush on the sector shaft.

CHANGING GEARS.

Don't Let the Engine Labor.

Despite the remarkable top-gear performances of modern cars, they are not built to climb every hill in top gear, and, thanks to the introduction of "silent" lower ratios, much higher average speeds can be maintained during a cross-country journey without inconvenience. But an error made by many drivers is to delay changing down until the engine has begun almost to labor in top and speed has been lost. It is far better to engage third or second gear when the vehicle is moving at a reasonably fast pace for by so doing the transmission will be relieved of much strain and an even speed can be maintained.

CHANGING A WHEEL.

Making the Best of a Trouble.

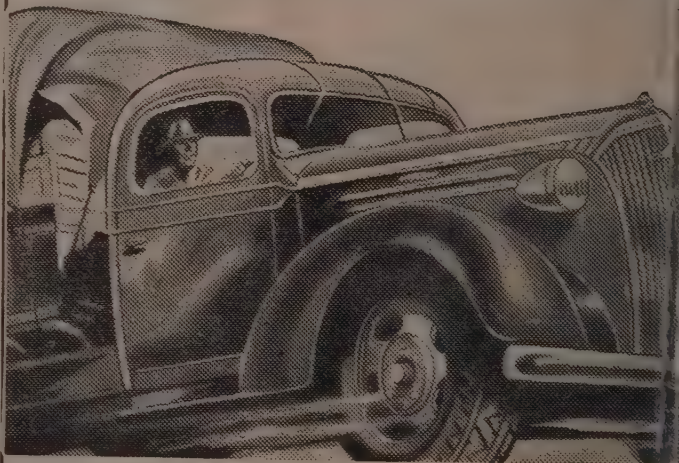
One of the least popular jobs that the motorist has to do is to change a wheel on the road, especially if he has good clothes on and the road is muddy or dusty. Fortunately the modern car is fitted with detachable rims or spare wheels that lessens the effort necessary and most of us have memories of changing tyres under the old system. Even so there are some sensible points that apply.

The prudent owner is careful to see that the jack, wheel wrench and tyre pump are always in the tool kit, and that wheel nuts are not allowed

to rust, but are greased from time to time so as to make their work easy. When jacking up a wheel or more of the other wheels always be chocked, the chocks placed on the downward side in which direction the car might to roll. The spare wheel or rim should be made ready and put close at hand before the other wheel is removed and should without delay be placed in position, so as to minimise the risk of the car crashing off the jacking nuts should be screwed up and fairly tightly before the car is lowered, and then when the car is resting on the ground a final tightening should be given. Needless to add, the handbrake should be in the "on" position during the jacking out of the work.

More Power per Gallon Less Cost per Load WITH THE CHEVROLET

30 cwt. - 2 ton and Commercial Models



NEW BIG VALUE FEATURES include: Improved Perfected Hydraulic Brakes - New Full-floating Rear Axle - Four-bearing Crank and Camshaft - New Improved Engine Supports - New Stabilised Front End - New Steering with Increased Ratio - New Stronger, Straighter Frame - New U-Type and Box Section Cross Members with Alligator Jaw Fastenings - New Spring Hangers, Springs and Spring Helpers - Massive appearance with steelstream styling - All-Steel Sedan-Type Safety Cabs, with V-Type Safety Glass Windscreen, etc.

CHASSIS PRICES

Commercial Truck from - £210
30 cwt. - 2 ton Truck (131 w.b.) from - £220
30 cwt. - 2 ton Truck (157 w.b.) from - £230
All Prices Plus Sales Tax

DON'T FORGET PRESTON MOTORS' 24 HOUR ACCESSORY AND REPAIR SERVICE.

Six Cylinder
CHEVROLET
Long Life

Sold and Serviced by Chevrolet Dealers throughout Australia.

Metropolitan Distributors:

PRESTON MOTORS PTY. LTD.
114 Franklin Street, Melbourne

CANNING AND JAM FRUITS

Paper Prevents Scald

LEETON'S NEW MANAGER.

Over Stumbles Upon Fact.

Scald is one of the common diseases of Apples in storage, says the "American Fruit Grower." Studies have attributed the appearance of this skin-ruining condition to the collection of gases about fruit in storage containers. The Department of Agriculture in 1911 as a scalded oil paper has been the effective measure against scald for years, and the experience of G. Shaw, prominent Ohio grower, the past season shows how an accident happening might change our fruit handling practices. "A number of years," says Mr. Shaw, "we have been using shredded paper to prevent scald in stored Apples. Last fall we were using the usual amounts of the paper in the storage crates with the expectation that this amount of paper would handle the job as it has in the past. We were packing the Apples in the Yorks before placing a storage. I noticed that we were using too much of the paper. Since it was the last of the Apples to go into storage, I told the men to use up the rest of the paper for the remainder of the season. I didn't think any more about it until we started moving the Apples into storage. Then I noticed that the Apples having the usual amount of paper in the crates were scalded, while those that had the extra paper had not. This convinced me that in the future we are going to put more oil paper in the York packages and in the other varieties that tend to scald badly. I believe that one pound of the shredded oil paper to each bushel will be enough to prevent scald, and I'm going to use more of it. I'm going to use more of my storage Apples next season."

The action of the Leeton Cannery in appointing Mr. Williams as general manager has been favorably received in the district. He comes with a large experience of the canning industry, and plans to maintain and increase the high name made by Leeton products in the past. While welcoming Mr. Williams to his new responsibility, the cannery plans to perfect its organisation, bring their processing programme to an even higher state of efficiency, and reduce cost of production.

With the co-operation of suppliers in the form of even better grades of supplies, the cannery faces the future with optimism. Improvements in machinery and plant proposed include an expenditure of £21,000. A new warehouse will be provided, and a re-arrangement of the equipment will enable the cannery to handle an increased output.

CANNED BRIEFS.

During 1937 the canned Grapefruit production in U.S.A. will reach 10,250,000 cases, according to the latest estimates.

The California Apricot Stabilisation Committee has recommended £12 per ton as the base price for canning fruit this year.

Until a few years ago only the White (Roval Anne) Cherry was canned in California. Black Cherries were said to contain too much acid, which ruined the tins. Now a container has been devised that will keep indefinitely, and canned Black Cherries are becoming so popular that growers are extending their trees of this variety.

Exports to June 30

Nearly a Million Cases to Date

The exports of canned fruit from Australia for the six months ending June 30 were as below. The figures represent cases of 2 doz. 30 oz. tins, or equivalent. The destinations are also shown:—

Country.	Apricots.	Peaches.	Pears.	Salad.	Pine-apples.	Total.
U.K.	60,903	358,141	443,817	755	9,717	873,333
N.Z.	6,933	18,714	10,881	112	984	37,124
Canada	5,347	34,740	2,293	1,265	12,532	56,177
East	2,147	5,396	3,685	1,317	67	12,612
Miscellaneous	640	1,136	1,688	21	194	3,679
Total	75,970	418,127	461,864	3,470	23,494	982,925

CANNING IN JAPAN.

Oranges and Pineapples.

Orange and Pineapple canning in Japan is increasing. Their value in 1935 amounted to £200,000 for Oranges and £600,000 for Pineapples, which compares very favorably with those of preceding years. The increased interest in canning fruit in Japan is ascribed to Japan's ability to establish markets in Great Britain and U.S.A.

The efficiency of the Japanese canneries is said to be astonishing, says "Hadar." Sanitary conditions are comparable with, and better than some of the canneries in other countries. Canned Mandarin Oranges from Japan have become firmly established on the London market. The quality of Oranges is quoted as good.

GRAPEFRUIT BY-PRODUCTS.

Big Texas Increase.

In the coming season citrus processing factories in Texas will pay upwards of £100,000 for 60,000 tons of Oranges and Grapefruit to be converted into canned juice, concentrates, marmalades, wines, flavoring, beverage bases and picked and candied peels, according to the U.S. Department of Agriculture.

As showing the development of this side of by-products manufacture, it is reported that in 1933 three Texas manufacturers paid £2,000 for culled fruit. In the following year seven plants operated and paid £10,000 for fruit. Two years later 17 plants were operating, and used 25,000 tons of Grapefruit at a return to growers of £53,000. This season a still greater increase is anticipated.

SHING CANNED PEARS.

Chain Stores Help.

Indication of how the large stores in America co-operate with canneries in the absorption of surplus supplies is reported from U.S.A. Record breaking sales of canned Pears were reported in 1936. In May, it was reported that this special "Canned Pear" would almost clear surplus and relieve a position that had bedeviled the industry. In January 1 it was estimated there was a surplus of canned pears on hand of over 3,000,000 representing a carry-over from the previous season. The surplus was occasioned by an exceptionally early crop and supplemented by the effect of the maritime strike on the coast and unsettled foreign markets. The large chain store organisation sold over 10 times more sales, two weeks in early May, than normally sold. The special sale resulted in a decrease of demand to about its normal quantity that season of the year.

ARE YOU GRUBBING?

Previous experience had convinced me that to be really efficient a grubbing machine should have ample power and ropes that will meet the heavy demands required of them. I found that shovel and axe work is very costly either by itself or in conjunction with a machine. The machine that offered these features, with a host of others, was THE "MONKEY" GRUBBER.

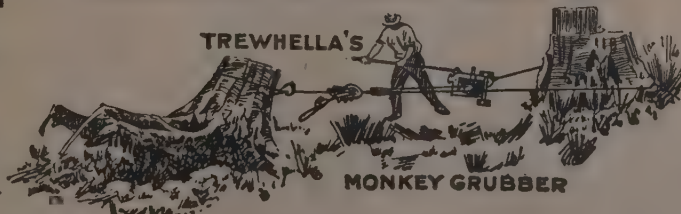
It gave me the power of 260 pairs of hands in a simple and compact form; the lever is short, so that I am able to stand firm-footed and get the full stroke. There are two speeds in the machine, as well as an automatic release that allows me to let off a strain, or as the machine will work in any position, it comes in for all jobs that would require a chain block. It is taken to the job on a pair of wheels like a barn truck, and is rigged for work in a few minutes. The ropes are in lengths that I find easy to handle, and each one is fitted with hook and loop couplings, so simple and absolutely IT for effectiveness. The makers have included a sturdy snatch block with a novel method of securing to the ropes, and also a fine type of firm gripping rope shortener. The latter makes it very easy to accommodate the lengths of rope to the tree or stump being pulled, and is quickly released from the rope. The combination of so many time and labor saving features makes the "Monkey" Grubber a superior grubbing outfit.

REMEMBER FOR YOUR GRUBBING THERE'S ONLY

H. H. HINDS,
225 Clarence Street,
Sydney.

A. G. WEBSTER
& SONS,
Hobart & Launceston.

TREWHELLA'S



MONKEY GRUBBER

A. ROBINSON,
821 Ann St., Brisbane

Leading Stores and
Merchants, South and
West Australia.

TREWHELLA BROS. Pty. Ltd. Trentham, Vic.

MELBOURNE ROYAL SHOW

23rd September, to 2nd October, 1937

NINE DAYS——— FIVE NIGHTS

*Fruitgrowers: Exhibit Your Produce at this Show—
the finest advertising medium in Victoria
for the Fruit Industry.*

LIBERAL PRIZE MONEY OFFERED FOR ALL VARIETIES OF FRUIT

Entries Close Saturday, 21st August

WRITE FOR PRIZE LIST.

LOUIS MONOD, Secretary, R.A.S. of Victoria
422 COLLINS STREET, MELBOURNE

AMERICAN CANNERS' HUGE PROFITS.

Annual Reports Received.

Two large American packing houses have issued their annual reports, which show that 1936 was the best year for the canneries since 1930. Converted into Australian currency, the California Packing Corporation made a net profit of £949,454 on a total turnover of £12,350,025, an increase of 6.2 per cent. over 1935. During its peak season, the corporation had 35,000 persons on its payroll and paid out in wages £2,650,000.

Libby, McNeil & Libby made a net profit of £900,503—6 per cent. higher than 1935. The total sales turnover was £14,878,386. The volume of both production and sales created a record. Compared with figures of recent years, costs to the consumer have dropped.

"PORT BRISBANE" CASE SETTLED.

Shipping Company Pays £4,000.
What is commonly referred to as the "Port Brisbane Case" refers to a

shipment of Pears sent to England, the Batlow Packing House and Stores Rural Co-operative Society Ltd., which were damaged in transit. The Society made claim on the Shipping Company concerned and the case was taken to Court. The Supreme Court in N.S.W. returned a verdict for the Society for the amount of claim, £3,213/18/-, plus costs.

The Shipping Company then made an appeal, which was taken to the Full Court of N.S.W., and again the Society won its case. An appeal made by the Shipping Company to the High Court of Australia in negotiations between the two parties were conducted and the Society notified that a compromise has been accepted by which the Shipping Company will pay £4,000 in finality of the claim.

The solicitors for the Society advise that this settlement does not affect the value to the industry of the verdict obtained.

LIGHTNING HOME BUILDER

Many Satisfied Users.

Mr. George W. Mawman, manufacturer of the popular "Lightning" cement block-making machines, has many enquiries and very satisfactory sales following his advertisement in this Journal. He has received unsolicited testimonials from satisfied users in every State. He lists the following twelve reasons why the "Home Builder" machine should be used:—

1. The Home Builder reduces the cost of building from 50 to 75 per cent.
2. Home Builder Blocks cost 8 pence to produce.
3. The blocks are equivalent to eight ordinary red bricks in one square foot of wall surface.
4. They can be made at the rate of 200 per day by one man with the machine, which includes mixing concrete by hand.
5. Home Builder Blocks can be laid quickly and use less mortar than bricks.
6. They also contain air spaces and can be used for ventilating purposes. If not so used they provide effective insulation from heat and cold.
7. The Home Builder builds outbuildings, etc., that are resistant against white ant and boiler and flood, and are absolutely permanent.
8. The machine is scientifically and strongly constructed from high-grade steel, and is surprisingly light, considering its strength, and can be easily moved long distances by hand.
9. It is easy to operate, it has no movable parts, no complicated mechanism, it cannot become out of order, and is built to last indefinitely.
10. It is simple and speedy in operation. It is by far the cheapest and best machine of its kind on the market at the present time.
11. Further, the machine is 100 per cent. Australian, being designed and patented by an Australian engineer, manufactured throughout from high-grade Australian materials by skilled Australian men.
12. The "Lightning" Home Builder Machine is 100 per cent. Australian and is a permanent investment. Its cost is negligible.

Dealer: "This is the best I have, but I wouldn't sell him one, letting you know his one gets very angry if his food doesn't suit him."

Miss Oldmaid: "I'll take him, seem quite like having a machine in my house."

Cables—Monro, London

Codes—A.B.C. 5th Edition and Bentley's

GEO. MONRO Ltd.

The Most Important Fruit-Distributing Organisation
in the World.

COVENT GARDEN MARKET, LONDON, and SMITHFIELD MARKET, MANCHESTER

Other Branches: BIRMINGHAM, GLASGOW, WORTHING, SPALDING and HULL



Sales on Commission, by Private Treaty only.

Over sixty years' of Fruit Distribution.

We do not purchase.

Our Sale Rooms are the largest and most up-to-date in England; consignments are therefore displayed to the best advantage, consequently, our returns are the best.

We have specialised in the Sale of Australian Apples and Pears by expert salesmen for many years past, and we have the largest and best customers in Great Britain amongst our clients.

Bigger and better business is our objective.

We make advances to cover cost of freight, etc.

(Established 1862)

DIRECTORS:

Major Edwin G. Monro, O.B.E. (Chairman), Geo. Monro, C.B.E., Bert J. Monro, Captain J. Stuart Monro, Alex. J. Monro, and C. Cole.

Chief Agent in Aust.—Major H. Dakin, V.D., Goldsbrough House, Macquarie Place, Sydney, N.S.W.

Victorian Representative
Southern Tasmanian Representative
Northern Tasmanian Representative
West Australian Representative . . .

Esmond Russell Pty. Ltd., 395 Collins St., Melbourne.
W. H. Irin & Son, Dunn Street, Hobart.
Bell & Gerrard, No. 200 Cimitiere St., Launceston.
The Westralian Farmers Ltd., Perth.

Apple Publicity in Sydney

For Better Fruit

Oil Spraying Programme

Strong Committee Actively at Work

Much Enthusiasm at Apple Distribution at Schools.

APPLE AND PEAR publicity campaign is in full swing in Sydney. A strong Committee has been formed to attend to national publicity. The Chairman, Mr. A. U. Tonking, M.L.A., joint Secretaries, Col. E. E. Herrod and Mr. P. S. Macdermott. The committee consists of representatives of the Fruitgrowers' Federation, N.S.W., the N.S.W. Chamber of Agriculture and Vegetable Industries, W. Apple and Pear Export Association, and the Chamber of Commerce. Prof. Harvey Sutton (on Committee), Mr. McKay, an Government representative.

From the press and radio, distribution of posters, books, health booklets, also stickers and pamphlets for schools, the Sydney Publicity Committee is arranging for August "Apple Month" in Sydney. There being decked out with competitions are being arranged for best dressed fruiterers and the best decorated fruit stalls. Addresses on Apples and Pears are being arranged over the "B" Class stations, also before housewives' Association, Australian Women's National Council and city clubs.

Apples for School Children.

Wednesday, July 28, 4,000 apples were distributed to schools in the Sydney suburbs—schools in Alexandria, Erskineville, Newtown, also to boys at Christian Brothers School and at the Sisters of the Good Will School at Newtown. A sub-committee under the guidance of Mr. J. Holmes arranged for the giving of the Apples to the schools. Then at the actual distribution the Apples, several members of the committee attended—Mr. Tonking, M.L.A., (Chairman), Col. E. E. Herrod and Mr. P.

S. Macdermott, joint Secretaries Messrs. L. J. Jenkins, C. A. Ward, O. Blick and McKay (Tasmanian Government representative). Mr. R. E. Boardman, Publicity Director of the Australian Apple and Pear Council, addressed the pupils on the subject of "Apples and Health" at most of the schools, and Col. Herrod spoke at the Christian Brothers School. The theme was the health and food value of the Apple and the necessity for eating an Apple after each meal, and particularly an Apple last thing at night before going to bed—the Apple being "nature's toothbrush."

In this worthwhile effort the Committee had the close co-operation of the Education Department as well as the Headmasters and staffs of the schools. Much enthusiasm was evidenced.

At the Newtown School the Headmaster, Mr. Willock, thanked the Committee not only for the appreciated gift of Apples, but for the excellence of the arrangements and the assistance by members of the Committee in the handling and distribution of the fruit.

Mr. A. U. Tonking, M.L.A., in expressing appreciation for the effort, stated he was convinced that this form of publicity was amongst the most important which could possibly be conducted. He said that not only were the children impressed, but the Apple and health story would surely be taken home to parents in a most acceptable way. This was in addition to the press publicity which followed the enterprise.

It is intended to continue Apple distribution to schools as part of the publicity activities. It is also thought that the present effort is paving the way for work of a similar character in 1938—during the earlier part of the year, when Apples are more plentiful.

W. CITRUS GROWERS' DEFENCE ASSOCIATION.

At the meeting of the executive of the Citrus Growers' Defence Association, Mr. W. J. Black presiding, it was decided to watch the interests of citrus growers in the allocation of space at the new City Markets.

Appreciation was expressed for the efforts of Mr. R. B. Walker, M.L.A., who endeavors to have the Orchard Bill amended.

R. Roughley (Middle Dural) stated the agitation for the removal of the tax, or at least for a reduction, on the part of the growers on the subject has been going on for some years, and a time had come for definite action. It was resolved to write to the Minister to ask for a decision as to the Government attitude.

Embargoes: The embargo on the export of citrus to Norfolk was regretted, it being stated the ostensible reason—the pos- sible spread of fruit fly—was unten-

Regarding N.Z., the lifting of the embargo from November to March was no service to coastal growers, the past has furnished the example. It was decided to favor to secure the lifting of the embargo entirely or at least from December 31.

IMPERIAL FRUIT SHOW, 1937.

Fruit Beverages Added.

The Department of Commerce has received class schedules and entry forms for the Imperial Fruit Show and Canners' Exhibition, which this year is to be held at Birmingham from October 20 to 28.

The Australian products which may be entered for competition include honey, citrus fruits, Apples, canned fruits and canned vegetables.

A new section, pure fruit beverages, has been added to this year's Show, and the citrus and grapefruit classes of this section are open to competition for Australian exhibitors. If the new section is well supported, it is probable that its scope will be extended in future years.

The Imperial Fruit Show provides Australian firms with an opportunity to demonstrate the excellence of their products in competition with other Empire suppliers, and in past years those firms who have submitted entries have achieved considerable success. It is hoped that Australian products will be well represented in the various sections of this year's show.

Entry forms must be lodged with the Department of Commerce, Canberra, before August 14, and intending exhibitors may obtain full particulars and entry forms on application to the Department.

A USEFUL booklet on the control of orchard pests, under the name of "Better Fruit," is presented by Vacuum Oil Company Pty. Ltd., and can be obtained from the company's offices. In discussing the use of Gargoyle Red, Pale and White spraying oils, the company says:—

"The problem of arranging a comprehensive spraying programme to care for fungi, scale and insect infestation necessitates the consideration of the compatibility of the various specific uses and their reaction on the various parts of the tree.

"Experiments conducted over a great number of years has demonstrated the high commercial value of a dormant oil spray. The time of application is a most important factor, and the closer one can get to the bud development the more effective the results will be. For Apples and Pears the end of July and early August is the time for the dormant spray. This also applies to

Peaches, Apricots and Cherries, for, in addition, the spray will control scale, aphids, byrobia, etc., which hibernate on the trees.

"Owing to the emollient action on the bark, the foliage of deciduous trees is definitely enhanced by the oil spray, the leaf system being just as important as the capillary roots. The late Prof. McAlpin stated that a thousandth part of a grain of copper sulphate, provided it could reach the rooting system of the fungi, would effect their destruction."

The booklet deals with the life history and habits of numerous orchard enemies, methods of control and practical information to enable orchardists to obtain the best results from their efforts. A valuable addition in the booklet shows the class of tree, the kind of pest, what to use, time of application, and comments for the guidance of the orchardist. It is profusely illustrated and shows pictures of the effect of various diseases and pests.

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Substantial local markets with a fruit sales room actually on Southampton Docks Estate. Quicker and frequently cheaper transit to Southern and Midland Towns. The Southern Railway of England runs express freights from Southampton to all these centres, saving days and money.

London is reached by express freight trains in three hours from Southampton—All fruit unloaded in Southampton to-day will be at Covent Garden, Spitalfields, or Borough Market for early morning market to-morrow, with days saved as against fruit discharged by ships calling at Continental and other outports first. The slight additional cost is altogether outweighed by the tremendous advantages of days saved.

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of other operations. London is the key port, not only of Great Britain, but also of the Continent, and, by supplying the markets of Europe, is the pivotal force in international trade.

London, as the financial centre and magnetic power in international money market of the world, exerts a trade. Bills of Exchange in London

are the currency of world commerce, and in London, exporters and importers of produce can make more advantageous financial arrangements than in any other market, as the London market attracts the largest number of buyers.

No dividends in the ordinary way are looked for by the Port of London Authority. Once the low fixed in-

terest on the bonds, amounting about £40,000,000, is met, all go into reduction of rates and improvements. Therefore it is true, operative, the larger the business, the lower become the rates. The Authority has reduced charges during the eight years by £1,000,000 per annum, although wages are 70 per cent. higher than they ever were.

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Export Apples, Pears and Plums—1937. It pays Growers to Export To the English and Scotch Markets this season to obtain the best average returns for their Pears, Plums and Apples, And if

You Want Genuine Satisfaction and Highest Returns, send them to—

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Export & Commercial News

Fresh Fruit Exports

Exports have Declined — Pears Increased.

Department of Commerce has issued the following particulars relating to exports of Apples, Pears and Grapes, for the six months ended June 30th, 1937, together with comparative figures for 1936.

Apple Exports—January to June, 1937.

To the United Kingdom.	To the Continent.	Other Destinations.	Total, 1937.	Total, 1936.
Cases.	Cases.	Cases.	Cases.	Cases.
67,193	3,315	26,252	96,760	92,173
633,744	50,735	33,358	717,837	626,969
15,148	—	9,802	24,950	25,984
224,063	24,251	17,903	266,217	459,738
422,590	180,433	76,287	679,310	896,563
2,451,744	250,097	81,858	2,733,699	2,756,297
3,814,482	508,831	195,460	4,518,773	—
4,158,549	542,349	156,826	—	4,857,724

Boats loaded fruit during the month of June for United Kingdom, Continental ports, and the rest of the world. The volume of this trade was reflected in the volume of fruit falling off in the volume of fruit for the month. During the month of June, 1937, 135,950 cases of Apples were exported to all destinations, but during the same period in 1936, exports totalled 135,950 cases.

There was a decline in exports to the United Kingdom by 344,067 cases for the month of June, 1937, compared with the 1936 figure of 671,134 cases, due to the observance by

Australian exporters of a voluntary export quota in respect of that market. During the season shipments were made to the following ports in the United Kingdom:—Avonmouth, 9,348 cases; Glasgow, 235,405 cases; Hull, 460,889 cases; Liverpool, 720,187 cases; London, 2,286,423 cases; Manchester, 32,536 cases; Southampton, 69,694 cases.

The volume of trade with European countries in 1937 also shows a reduction to the extent of 33,518 cases.

Pears Exports—January to June, 1937.

State.	To the United Kingdom.	To the Continent.	Other Destinations.	Total, 1937.	Total, 1936.
	Cases.	Cases.	Cases.	Cases.	Cases.
N.S. Wales	14,373	—	14,736	29,109	32,110
Victoria	476,160	2,650	7,768	486,578	416,111
Q'land	—	—	—	—	147
S. Aust.	50,040	—	1,392	51,432	26,628
W. Aust.	22,754	6,941	1,416	31,111	45,782
Tasmania	201,127	2,354	2,410	205,891	106,752
Total, 1937	764,454	11,945	27,722	804,121	—
Total, 1936	590,118	14,179	23,233	—	627,530

The quantity of Pears exported during the month of June was only 19,604 cases, as compared with 119,669 cases in the previous month. However, a substantial increase in Pear exports has been made this season, exports to all destinations being 176,591 cases in excess of those for the corresponding period of the previous season. Increases of 174,336 cases to the United Kingdom and 4,489 cases to other destinations were only slightly offset by a fall of 2,234 cases in Continental shipments.

The following table summarises the figures relating to the export of Grapes from Australia:—

Exporting State.	United Kingdom & Europe.	Eastern Countries.	Other Destinations.	Total, 1937.	Total, 1936.
	Cases.	Cases.	Cases.	Cases.	Cases.
N.S. Wales	—	18,811	5,501	24,312	22,784
Victoria	—	13,357	40	13,397	13,996
West. Aust.	6,656	54,489	600	61,745	50,975
Other States	450	668	4	1,122	534
Total, 1937	7,106	87,325	6,145	100,576	—
Total, 1936	6,875	75,322	6,092	—	88,289

It will be seen that Western Australia is by far the largest exporting State, the increase in total exports from Australia being mainly due to the fact that shipments from that State to Eastern countries rose from 43,753 cases in 1936 to 54,489 cases in 1937.

The principal Eastern destinations to which Grapes were exported in 1937 are:—India and Ceylon, 33,905 cases (Western Australia 27,626); Straits Settlements, 29,707 cases (N.S. Wales 8,415, West Australia 18,786); Netherlands East Indies, 9,579 (West Australia 6,680).

A new citrus packing plant has been erected in Ventura County (Calif.) by the Seaboard Lemon Co. at a cost of \$35,000.



Under Farm Produce Agents Act.

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Fruit Commission Agent

HIGHEST MARKET PRICES — PROMPT RETURNS — RELIABLE ADVICE.

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Regular Consignments of well Packed
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Best Prices.

Ship Your Oranges,
Lemons, Grapes to
New Zealand

All consignments for this market will have careful attention and realise highest prices if sent to

The Co-operative
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PERSONAL SUPERVISION
OF
EVERY CONSIGNMENT.

Cheques posted promptly.

Drop us a Line or Cable:
"Peachbloom," Dunedin.

VICTORIAN FRUIT MARKETING ASSOCIATION.

THE monthly meeting of the executive of the Victorian Fruit Marketing Association was held at the C.T.A., Melbourne on Friday, July 30, 1937, at 11 a.m. There were present: Messrs. G. W. Brown (President), A. S. Carne (Vice-Pres.), F. Moore, E. Russell, S. Brown, H. M. McLean, G. Douglas, K. Eagle, F. Cave, W. A. Thiele, C. H. Jost, H. J. Noonan (Cool Stores Association), E. N. Robinson (Commonwealth Coordinating Officer), and the Secretary, R. E. Boardman.

Apologies were received from Messrs. R. Bailey, A. S. Harrison, J. W. Barker, J. J. Tully, H. G. Sprague, W. P. Hutchinson, A. Perry, and F. M. Read.

Cool Storage Enquiry.

The chairman stated that while the Committee found there was ample cool storage space in metropolitan and country districts for all Victorian perishable commodities needing cool storage there was insufficient cool storage space available for the export trade—meat, butter, eggs, fruit etc. The Committee had signed a report to the Minister recommending the

absolute necessity for the rebuilding of the Government Cool Stores, with a capacity of 450,000 cub. ft., which would be smaller than the previous Government Cool Store, but at which store much of the space had been unoccupied.

There was a minority report by the representative of the Metropolitan Proprietary Cool Stores Association, in opposition, on the ground of sufficient space being available within the State.

As the terms of reference, however, specifically referred to the export trade, and as obviously country fruit cool stores were not available for butter, etc., the minority report, stated Mr. Brown, was not soundly based. It had also been recommended to the Minister, that the present Committee remain in existence as a Consultative Committee.

Mr. Esmond Russell stated he had attended the Cool Storage Enquiry as a representative of the Fruit Exporters' Handling Committee. He confirmed the chairman's report. The Committee was unanimous, but for one man. The cool store for export commodities was needed, whether built by the Government or by private enterprise.

Sale of Large Fruit by Count.

The chairman reported that a representative deputation from the industry—Growers' Association and Retailers—had waited on the Minister for Agriculture, pointing out the benefits that would accrue to the growers, distributors and the public from the compulsory sale of large fruits by count instead of by weight. The Minister had replied there was nothing to stop the trade from attending to this matter voluntarily, further, that the deputation did not include the consumers. Report received. It was decided to write to the Women's National League, Country Women's Association, Housewife's Association and Labor Women's Organisation for their endorsement of these proposals.

"Port Brisbane" Case.

Mr. H. V. Smith, Batlow Cool Store's Co-op. wrote stating that after having won their case, re faulty carriage of Pears (for £3,213 plus costs), in the Supreme Court and the Full Court, the Shipping Co. appealed to the High Court of Australia. However, a compromise had now been agreed to by the Shipping Co. to pay £4,000, and each side to pay its own costs. This acceptance

did not affect the value to the try of the verdict obtained. The settlement left the Batlow Co. approximately £1,000 short of costs, they requested that V.F.M.A.'s contribution of 50% be allowed to stand in full.

The chairman pointed out the importance of the Court's decision, the fact that this was the first which had thus been decided in Australian Courts.

On the subject of freight, the representations were successful in getting the cash rebate of 3d. per cwt. the first year (instead of deferred as proposed by ship owners). Under normal conditions the rebate should continue. Improvements were being sought with regard to Continental trade. Despite reports re trade agreement with the (Mr. Mills) did not think there would be any reduction in the preferences on Australian fruit, the subject of printed fruit was rising costs did not justify expense at this stage.

Apple and Pear Council Conf.
Letter received from Apple and Pear Council, stating that after consultation with State Association the President, it had been decided annual conference would be held in Sydney in the week commencing October 25.

Freight Agreement.

Letter received from Apple and Pear Council sending minutes of emergency executive meeting of June 8 re Freight Agreement. Reports of deputation to O.C. Sydney, in this connection.

The points included—reduction of freight of 3d. (sterling), commencing in 1938, plus continued rebate if shipping conditions improved. Freight agreement to be on a year basis, scientific efforts to be encouraged to improve dunnage stowage; desirability of one case for each State; shipowners to supply arrival dates of vessels to give favorable consideration to supplying of prompt details of goods shipped.

Mr. Moore pointed out that the delay back until August of the year of the 2d. per case was too long. He moved that this item for the agenda paper for forthcoming conference of the Apple and Pear Council. Mr. Moore seconded. Carried.

In response to a question re the export bounty, the chairman stated that the Apple and Pear Council had already applied to the Government for a bounty on exports, but that with regard to exports and onwards, it was full if the bounty would be carried. In view of rising freights elsewhere we were fortunate in securing reduction.

Report From J. B. Mills.

The Apple and Pear Council enclosing progress report from chairman, Mr. J. B. Mills, from London. This report congratulated the industry on holding to its quota figures. When pressed, been brought to pick up the situation from N.Z., the situation had been closely examined, with the result the Tasmanian Premier sent a cable opposing the suggestion the extra quantity gone forward even the cost of the freight have been recovered. Market conditions were disorganised by the coronation celebrations.

Pakenham Field Day.

Mr. Carne notified that a field day would be held at Mr. J. J. Orchard at Pakenham on August 10—pruning and top working.

The meeting then closed.

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TURBOT STREET, BRISBANE,
and be amongst the well satisfied.
Reliability is Our Motto.

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Others, C. & J.

Satisfaction Guaranteed

TRY —
ROCKHAMPTON, Queensland.

Orchard Fruit Supplies CO.,

FRUIT MERCHANTS AND
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BUY DIRECT, AND SOLICIT
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Leading Country Order Business
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Send Sample Consignment and
Arrange Prices for Season.

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Good Fruit . . .

WELL GRADED AND WELL
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READY SALE IN QUEENSLAND.

Do not run any Financial Risk with your Fruit
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SELECTED AGENTS FOR:

Victoria: Harcourt Fruitgrowers' Progress Assn. Ltd.
Harcourt Fruit Supply Co. Ltd.
Victorian Central Citrus Assn. Ltd.

Tasmania: State Fruit Advisory Board.
New South Wales: Griffith Producers' Co-op. Co. Ltd.
Batlow Packing House Co-op. Soc. Ltd.

Market Notes and Prices

Prices in the Sydney Market.

Operations from June 26 to July 25, 1937.

Pearce, Market Representative of Fruitgrowers' Federation of N.S.W.

The wintry weather was experienced until the end of June, when the weather has been fine but extremely cold. Discussions from these weather were, firstly, a general reduction in the demand for fruit, which is only now gradually increasing, and, secondly, a cessation of most fruits, due to the delay of picking, packing and shipping the product from various regions. Market values, however, have remained comparatively steady, the Apple position improving under the influence of restrained forwarding mania and a reluctance on the N.S.W. grower to forward fruit before values obtain a satisfactory level. It is probable that arrivals recently from overseas have been between 5,000 cases per week, while local supplies have been practically constant between 25,000 and 30,000 cases per week.

Retailers displayed very much less enthusiasm to take large quantities of oranges, supplies of which have been lighter than in the corresponding season of the year.

As the weather has been cold, quantities cleared at satisfactory rates. Undoubtedly the restrained demand for Apples from Tas. can be regarded as the reason for the steady values in the Apple market, which was in a very depressed state at the end of June. At that time prices for Cleo., F.C., Demo., and S.P. were practically unobtainable, the only sales made being for medium and large-sized boxes of F.C., S.P. and other varieties in the market and prices had to be accepted at a clearance. This position, however, has now changed, and most varieties, including S.P., but perhaps especially small F.C., are now enjoying a reasonably good demand. Providing they have a good season, they are still in good request, but are only in small supply, and prices are well advanced towards their season. Del. from nearly finished arrivals now range from 3/- to 4/-, with a few of the other varieties at 2/- to 3/-.

Arrivals have been very heavy since the shed-stored G.S., Pomme, London Pippin, Buncombe, and other varieties are coming forward; but we are still seeing the bulk of the cool season varieties, Dem. and Del. Values are still mentioned as having improved, but there are expectations of larger quantities being received in the near future.

Arrivals on the Sydney market totalled just under 115,000 cases in the month, an average of 3,800 cases per week. Prices: Buncombe, 4/- to 5/-; Cleo., 4/6 to 7/-; Crofton, 4/- to 5/-; Del., 4/- to 5/-; F.C., 4/- to 5/-; Fanny, 4/- to 5/-; Granny Smith, 4/- to 5/-; Jon., 5/- to 8/-; L. Pineapple, 6/6 to 7/6; P. de Neige, 4/- to 5/-; B., 3/6 to 8/6; S. Permain, 3/6 to 6/6; Sturmer, 3/6 to 6/6; Wineapple, 10/- to 12/-; Shipping and Export—Domestic, 1/- to 2/-.

Pears: Values have steadily improved where carrying quality and appearance continued. Packham's are now becoming scarce and most W. Cole appearing are small sizes. It is probable that larger supplies of these varieties will now arrive from Pear districts in Vic. Prices: B. Bosc, 5/- to 9/-; Gib. Seedling, 6/- to 9/-; Glou Morceau, 6/- to 10/-; Jos., 5/6 to 11/-; Triumph, 7/- to 12/-; W. Cole, 7/- to 12/-; W. Nelis, 6/6 to 10/-; Shipping and Extra Fancy higher—Domestic 1/- to 2/- lower.

Bananas: During the four weeks under review the Sydney market has received the smallest quantity per week for some years. The total quantity was 21,440 trop. cases, but in addition to this quantity, both Newcastle and Broken Hill received their regular quotas each week. Prices:—N.S.W. and Qld. regulation graded, first quality fruit. Six, Seven and Eight and Nine inch, 19/- to 25/- trop. case. Specially selected country order fruit higher.

Custard Apples: 2,861 cases arrived during the month. Steady demand was received. Prices: 3/- to 5/- half case.

Citrus Fruits: The absence of the general over-supply of various citrus fruits was particularly noticeable in

relation to Navels and choice large-sized Mandarins. In fact, most arrivals of Navels were from the M.I.A., due to the drought conditions last year in the metro, and coastal districts. Wet weather also interfered with deliveries of Lemons from coastal regions.

Grapefruit: At times there was an accumulation of coastal Grapefruit, and the limited operations of processors at 3/6 bush. were welcome. A particular brand of Weeney Grapefruit from Kurrajong has had outstanding value, and many comments have been made at the large variation in prices. The fact remains, however, that the average article produced may sell to 5/-, whereas the Kurrajong fruit sells up to 12/-, according to size and quality. Amongst inland arrivals, which have not been heavy, small consignments from Narromine have topped the market; much of the other fruit being too coarse in the skin to appeal to buyers. Prices:—N.S.W. local 1/6 to 5/-, few extra special 12/-; inland 5/- to 8/-, few 10/- and 12/- bush. S.A. 10/- to 12/- bush.

Lemons: A preponderance of extremely small sized fruit appeared at the end of June and beginning of July, when supplies eased considerably, due to wet weather. Latterly the beneficial results of the rain have been demonstrated in improved size, and counts around 150 per bush. have been much more noticeable. Demand, however, has been very weak for

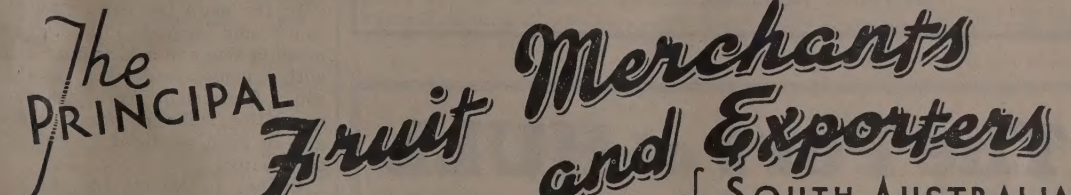
Lemons, and processors have only taken large-sized fruit at 4/- bush. Prices:—N.S.W. Spec. Stand. Local, 2/6 to 6/-, inland 5/- to 7/- bush. Peel, 4/- bush.

Oranges—Navels: There was a slight easing about the middle of July, when the excess supply of counts 56 to 100 caused those sizes to ease. Crates from the M.I.A. have been a feature of the market, the more popular sizes apparently being used for country order business, while the Sydney market received most of the large sizes. Coastal supplies have been light at all times, with Mangrove Mountain fruit probably obtaining the highest value of all fruit appearing from this State. A few S.A. Navels of choice quality came on the market. Prices: N.S.W. Spec. and Stand. Local and Inland 4/6 to 7/6, few higher. Plain grade 3/6 to 6/- bush. Two-bushel crates 9/- to 11/-, few selected counts 12/- to 16/- bush.

Other Oranges: White Siletta, Joppa and Med. Sweet have at all times received good request, particularly fruit of counts 180 to 216 at around 6/- for retailing at 6d. doz. Prices: White Siletta and Joppa 4/- to 6/- bush.

Mandarins: Prices: N.S.W. Spec. and Stand. Local: Emperor, 1/6 to 7/-, few 9/- bush. Inland, 4/- to 7/- bush.

Papaws. Qld., 10/- to 14/- trop. case.



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Passionfruit: Steady values have been received, most sales throughout the month being from 6/- to 10/-. Deliveries appeared from the central north coast in addition to choice fruit from Mangrove Mountain. Prices: N.S.W. 6/- to 8/-, few special 10/- small from 3/- half case.

Pineapples: The total for the month was 7,840 tropical cases. Values have depended upon the operations of shippers to a large extent, and, when these were not operating, lower prices were obtained. Prices: Qld. 7/- to 11/-, few higher, tropical case.

Strawberries: Deliveries have increased as the month progressed, the first week of the month showing 750 trays and 31 crates of boxes, whereas during the last week arrivals totalled 13,037 trays and 185 crates of boxes. Values for this period have been at 3/- to 5/- per tray and 10/- to 14/- or 15/- per doz. boxes.

VICTORIA.

Market Report for July.

JULY was rather a fluctuating month. The severe Winter weather was against any very heavy clearances and it was not until the last week that movement in some lines could be reported as satisfactory. Tomatoes came in from W.A. during the month. The condition was excellent and the bulk arrived green and ripened well after landing. They were reported generally as of better quality than in the past, a change into varieties more acceptable for the Melbourne market is a feature of this season's supplies.

In the main the early samples are round and smooth in texture, of medium size and sold to normal prices with a moderate demand for the season. Queensland Tomatoes came in quantities sufficient for the demand and in good condition. Prices were satisfactory.

Citrus: In Navels the supply was just sufficient to keep the movement steady at satisfactory prices. Mandarin supplies were lighter than at this time last year, but the bulk of the samples were on the small side. Prices for the best lines were good, but rather low for small grades. Lemon supplies were down at the beginning of the month and ruling prices were high but dropped during the month with locals cheap and affecting the prices for better grades. Grapefruit were slow all through, but supplies met the demand. Good, large, clean-skinned samples sold well, the smaller samples hanging fire.

Celery: Improved demand lifted prices in the last half. Supplies were about the same as in June. The quality was good and both supplies and prices satisfactory.

Apples: There will be plenty of Apples this season owing to a heavy crop. Grannies and Delicious sold well, other varieties moved quietly.

Pears: Good Packhams moved nicely the other varieties were on the slow side.

Pineapples: Early in the month movements were slow, but improved as the month advanced. Prices started low and supplies equalled demand.

Bananas: With the market short supplied, prices remained relatively high right through the month.

Pears were affected by the frosts, but good samples were in demand at good prices.

Beans: Queensland and N.S.W. supplies were well maintained and a good demand was reported, quality good.

QUEENSLAND.

Brisbane (17/7/37): Apples: Choice Jons. are selling freely, best brands of Tas. and Vic. realising 9/- to 10/-, for popular sizes. Other varieties are as follow: Demo. 7/- to 8/-, Sturmers 6/-, F.C. 6/- to 7/-, G.S. 9/-,

Cleos. 8/6, G.F., Aroms and H. 5/- to 8/-.

Pears: Coles and Jose are taining firm rates, the former to 14/-, and the latter to 13/-, Bosc and Packhams to 9/-, W. 12/-.

Citrus: Navels 8/- to 10/-, Navels 7/- to 9/-, Oranges 9/-, Lemons 9/- to 11/-, (Gayndah) 11/- to 13/-, Mar. Glens 11/- to 13/-, Emperors 12/-, Scarlets 9/- to 11/-.

Tropical Fruits: Custard App. to 4/-, Smooth Leaf Pines 6/- case, Rough Leaf 4/- to 5/-, Papaws 8/- to 11/- trop. case, anas (at present scarce) 6's 14/-, 7's and 8's 13/- to 16/-.

Passionfruit: Special grade 8/-.

Strawberries, 6/- to 9/-; 10/- to 13/- per doz. boxes.

Brisbane (20/7/37): Messrs. and Jesser report as follows:—the past month the supply of has been well maintained, but Pears are scarce.

Ruling values are: Jons. 2 1/2, 8/6 to 9/-, 2 3/4 7/6 to 8/-, Romes and other colored App. to 8/-, Cleos 8/-, Sturmers 6/6, F.C. 6/-, G.S. 8/- to 9/-, grade 5/- to 6/-, Pears: W. Jose. 12/- to 13/-, W.N. 11/-, Packhams 10/- to 11/-, O. Navels 7/- to 8/6, Common 7/6, Mandarins (scarce): Glens 14/-, Emperors large 11/- to small sizes 7/- to 8/-, Lemons to 8/-, Custard Apples, 3/6 per qrt. case. Pineapples, 7/- case. Bananas (very scarce), 11/- 20/- case. Tomatoes, 3/6 to Celery (South Australia), 11/- case.

WESTERN AUSTRALIA

Perth (21/7/37).—Apples: dumps 4/- to 7/9 (special R.B. 6/- to 8/6 (special to Yates 4/6 to 10/6 (special to G.S. 5/- to 10/- (special to 11/- 4/6 to 8/9, Nickajack 5/- to 9/- to 12/6 (special to 13/3). Vals., flats 2/6 to 5/-, Navels 3/6 to 8/- (special to 9/-), du to 11/6; Lemons, 2/6 to 5/- to 6/-; Mandarins, 4/- to 9/- to 10/-). Other lines: Pears, 4/- to 9/6 (special to 11/6); Fruit, quarter-dumps, 5/-; To 5/- to 12/- (special to 12/6, from 3/-).

NEW ZEALAND.

Dunedin (9/7/37): Messrs. Central Produce Mart Ltd. report as follows:—The market is well supplied with Apples, consisting principally of Del. and Sturmers with good supplies of cooking varieties also available.

Small shipments of Queensland Pineapples have been marketed.

Consignments of N.Z. Lemon Marmalade Oranges came to Dunedin during the week, and met with excellent enquiry.

Owing to the cold weather, Oranges have been slow, and supplies of S. Aust. Navels are still at a low level. Supplies of Calif. Lemons "Monterey" are due to arrive during the week.

Prices (per case): Orange Val. 40/-, Aust. Navel Orange to 22/-, Cal. Lemons 80/-, Gr. 40/-, Bananas (ripes) 18/-, rines 22/-, Pines 25/-, Pear 8/- to 10/6, W.N. 8/- to 10/6, ing Pears 7/-, Apples: Del. 9/-, Jons. 6/- to 8/6, Sturmer 9/-, G.S. 8/- to 10/-, Cleo. 6/- small and inferior grade Apples 2/9 to 3/6, Cookers 4/- N.Z. Lemons to 32/-, Oranges 16/- (Per half case 3/- to 4/6, W.N. 3/6 to 4/6, 5/-, Passionfruit 8/6 to 10/6).

rate with China
Balance Favours Australia.

China's imports were valued approximately £70,000,000, and exports at £53,000,000. The portion of trade is done at the receipts in northern have been largely reduced by the system that has grown years. Of her imports, 13 represented foods, 10 per materials and 55 per cent. goods. With this brief what does Australia supply port from China?

Imports from Australia.
Australia supplied to China the value of £3,587,870, re- 4.03 per cent. of China's ts. The greatest propor- for Australian wheat, but supplied 97,865 railway China's extensive railway programme. Sandal-wood from Australia fell nearly 20 in 1936 to £83,510. £94,867 worth of canned from Australia to China the largest proportion repre- water and milk. Canned fruits at only £8,210. Reports this commodity finds a dif- competing with cheaper and with local stone and

Exports to Australia.
Only £449,743 worth of ex- Australia, representing 0.86 of China's export trade, it that the balance of trade in favor of the Common- but exports increased by e of 1935. Linseed repre- China's largest item to Austr- 1936 was valued at £152,075 e over 1935 by nearly 300 e. Other important exports w silk £34,063, manufactured 45, lace and trimmings eial tung oil £43,513, walnuts cotton £17,443, and tea

ANIANIA'S INTERSTATE SALES.

inland consumes over a mil- of Tasmanian Apples per 1936 during the past five years 7½ million bushels, as the gradual drop in yearly the following table is quot-

	Bushels.
The mainland took	1,891,539
" "	1,422,909
" "	1,488,567
" "	1,389,579
" "	1,063,987
	7,256,581

SMANIAN APPLES.

over 100,000 Cases by Frosts Reported.

27/7/37.

have been received by the Sydney that frosts in Tas- ring July severely damaged es which were at the time es unpicked. Sturmers were ly affected and the crop e estimated at over 100,000

ARM INSPECTION LEVY.

ederal Parliament has passed Bill for the collecting of the ection levy on Apples and ported from Australia to all ns; previously the levy was only on Apples for U.K. and

Fruit by Count

Deputation to Minister

REPRESENTATIVES of the fruit industry waited upon the Minister of Agriculture (Mr. Hogan), on July 14 to urge that steps be taken to make the selling of Apples, Pears and other large fruits by count compulsory.

The deputation was introduced by Mr. J. G. B. McDonald, M.L.A., who also represented the Northern Fruit Growers' Association, who supported the request. He pointed out that the selling of large fruits by count would be welcomed by the industry and would result in the public getting better quality of fruit in quantities that would better meet its requirements and would effect an increase in local consumption.

Mr. G. Brown, President of the Victorian Fruit Marketing Association supported the proposal and said that it would enable both the retailer and the consumer to have more confidence in the product which they were buying. It would also help to remove certain abuses that at present exist,

specifically in what is commonly called top packing.

Mr. W. Thiele, representing the Southern Fruit Growers' Association, contended that selling by count would reduce costs and place the industry upon a better financial basis. Mr. L. Cole, representing the Fruit Cool Stores' Association, said that it would enable the retailer to know the quantity of a variety in each case, and he could arrange his sales better than under the existing conditions. He stated that the growers were generally in favor of the proposal.

Mr. E. W. Thompson, Secretary of the Fruit Retailers' Association, said that it was an absurdity that although Bananas, Oranges and Grapefruit were sold by count, other fruits, such as Apples, Pears, etc., were sold by weight. The frequent handling of such fruit, necessary in weighing, was a detriment. In making up lunches, to quote only one angle, the housewife could estimate her requirements better by count than by weight, and

Shipping Containers

How Good Must They Be?

A recent number of "Barrel and Box and Packages" states that, primarily, containers must meet the following requirements:—

The container must have the ability to retain its contents through all the various stages of transportation. The materials out of which the container is constructed must not only be strong enough to resist splitting or tearing open, but must also be properly assembled and closed so that covers will not loosen and come off.

The container, together with its interior packing, must have the ability to protect its contents from outside forces in storage, the vibrating encountered in moving freight cars and trucks, and the most severe forces of all, the starting and stopping of the vehicle in the course of its journey.

The container, and, of course, its interior packing, must possess the ability to protect its contents from the shocks and jars incident to handling, such as occur when containers are sent down gravity chutes, are roughly stowed or stacked, or are inadvertently dropped or toppled over.

The serviceability of the container must not be adversely affected by contact with water or from moisture vapor in the surrounding air.

The container should be of such size, shape and gross weight as to be easily handled, stowed and braced. To facilitate handling, the weight of the contents should be distributed as evenly as possible within the container, and containers should be provided with adequate hand holds wherever possible.

The cost and the tare weight of the container should be as low as possible, consistent with its proper construction and the efficient protection of its contents as outlined in the above points.

The container should be so constructed that it can easily be assembled and closed, and will fit into the production line if necessary. Where the volume is sufficient and there is a uniformity of size and shape, "ready-made" containers can usually be used to advantage.

SPECIAL NOTICE TO FRUITGROWERS

In response to numerous requests from growers for information as to who are members of the Wholesale Fruit Merchants' Association of Victoria the following list is given. All are members of the above Association, and are registered firms carrying on business in the

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FRANK BOOTH & SONS PTY. LTD. (16).
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TIM YOUNG & CO. PTY. LTD. (18).
F. W. VEAR PTY. LTD. (28).
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WING YOUNG & CO. (38).

Correspondence is invited by the Association.

Office : 21 Wholesale Fruit Market,
Queen Street, Melbourne. Phone F 4866.

she would welcome the general application of count to large fruits.

The Minister stated that at present the Cabinet was not satisfied that it would be in the interests of the public to sell all large fruits by count. He believed that the fruit interests should first educate the public to this form of buying. He stated that he still had an open mind upon the subject and would place the matter before the Cabinet for consideration.

LIST OF EXPORTERS.

Revised List Being Prepared.

Exporters of produce who desire to have their names included in the revised "list of exporters" being prepared by the Department of Agriculture are asked to forward particulars of the class of business handled, the name and address of their agents in the United Kingdom, and their Victorian cable address to the Director, Department of Agriculture, Melbourne, C.2. The list is being prepared for use here and by the office of the Victorian Agent-General in London. Exporters whose names appeared in the old list are asked to forward particulars as to changes of address and London agents.

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Cables—Reillys, Dunedin.

Reilly's Central Produce Mart Ltd.

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Reworking Peach Trees

Early Budding Recommended

WITH a view to obviating troubles caused by budding in late Summer with consequent damage by caterpillars of the Peach tip moth or by gum exuding from cuts made when budding, Mr. R. B. Thomas, Fruit Inspector, writing in the "N.S.W. Agricultural Gazette," advises budding Peach trees in the Spring or early Summer, in order to start growth as early as possible.

In preparing the trees for budding, he says, if the main limbs are too large, they should be cut back to suitable places at the end of Winter before they commence to shoot. Avoid large saw cuts which rarely grow over, and provide a favorable place for wood rot or blight organisms. The most suitable shoots for forming a new tree should be retained to bud.

Bud more shoots than are sufficient to form the new framework to allow for loss through wind or other

causes. Bud both on upper and lower sides near the top of the old limbs. Some can be removed later, if necessary, when the callus has crept well over the edges of the old cut. Thin the unwanted shoots, retaining only sufficient to encourage an even flow of sap. The selected shoots can be budded as soon as they are large and hard enough to receive the buds.

Rapid Growth.

In the Spring and early Summer fruit trees are generally making rapid growth, and the buds take so readily that the ties have to be removed about six days after budding. The growth above the buds should then be reduced to a lateral growth just above the inserted buds. This will force them into growth and when they have grown about 12 inches they should be shortened back to about 9 inches. This will assist them to with-

stand the winds, etc. It is also advisable to support them by tying. Any shoots from above the inserted buds must be checked.

The following particulars indicate the rapid development which takes place in budded trees at this period of the year:—December 10, trees were budded; December 16, removed ties and cut back to lateral growth above bud; January 9, all buds had made from 4 to 6 inches of growth.

Bud Direct into Branches.

In the case of trees with branches that are not too large to insert buds into direct, the budding can be carried out in the Spring. Scions of the required variety should be obtained before the buds commence to swell in early Spring. They should then be buried in about 12 inches under the ground in a cool, moist place.

The trees that are to be reworked should be prepared for budding by removing all unnecessary branches. The most suitable branches for forming a new head should be retained for budding. These branches should not be cut back. The trees should be encouraged to break into growth as early as possible in the Spring,

and when the bark will strip they should be budded, leaving wood in the bud.

When the buds have united they should be removed and the above the inserted buds cut within about 3 inches of the buds. The new shoots that from the buds should be pinched after they have grown about and any unnecessary shoots develop from the stock tree should be removed.

Orchard Windbreak

Height in Relation to the Protected.

THE question of whether belts of timber are desirable windbreaks for orchards is a vexed one. There is no doubt the writer of the N.S.W. Department of Agriculture, that to obtain the best results from fruit trees necessary that they should be adequately protected from wind. In many localities, this can only be provided in a practical way by timber.

The greatest objection to the of protection is that the trees in a lateral direction for a considerable distance, and either a wide must be left between the wind and the nearest orchard trees, the latter will suffer from the condition of the windbreak trees.

If only a boundary breakwind trees is required the space for the breakwind is not of such importance, but on some sites intermediate breaks are required to satisfactory protection from wind, the proportion of area then taken by timber breakwinds may be a serious problem.

What Californian Experiment Show.

In "Citrus Leaves," May, 1911, account is given by Harold W. Farm Adviser, Orange County, California, U.S.A., of a five-year investigation on orchard windbreaks carried out by the Agricultural Extension Service in Orange County. As many other aspects the relation between the height of the windbreak and the area protected was investigated.

Actual measurements taken in the recent survey showed a relation between height of breakwind area of complete and partial protection. The higher the trees, the greater the number of rows influenced.

The following chart was shown:—

Height of tree, feet.	Complete protection. In ft. from breakwind. feet.	Partial protection. In ft. from breakwind. feet.
35-69	152	295
70-89	189	393
90-115	238	441
Average	193	376

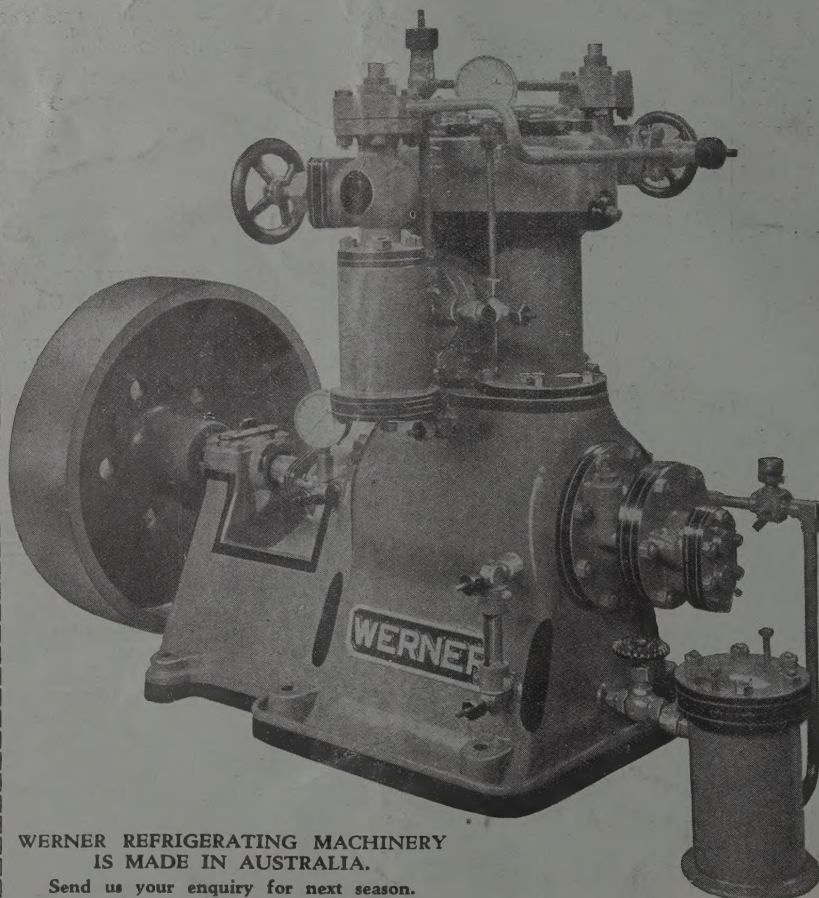
According to above chart a break 70 to 89 feet in height will give partial protection to a distance of 393 feet. That is to say, an intermediate breakwind would be needed about every seventeen rows. It must be borne in mind that wind trees of this height would appreciably rob trees for at least 10 feet on each side, and every intermediate breakwind would at least mean the loss of three rows of trees.

Arguments could be put forward that windbreaks at the bottom part-way up a slope would be better to check air drainage. But notwithstanding this, many growers of experience in hilly or undulating country state that parts of their orchard shielded by efficient breakwinds escaped frost damage when more exposed parts suffered severely.

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